D3.3 Access to Funding Handbook

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European Affordable Housing Consortium

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List of abbreviations

AHI	Affordable Housing Initiative
CF	Cohesion Found
CEDB	Council of Europe Development Bank
EC	European Commission
EEE	European Energy Efficiency Fund
EEM	Energy Efficiency Mortgages
EIB	European Investment Bank
EIF	European Investment Fund
EPC	Energy Performance Certificate
EPBD	Energy Performance of Buildings Directive
ERDF	European Regional Development Fund
ESCO	Energy Service Companies
ESG	Environmental, Social and Governance
FIs	Financial Instruments
JTF	Just Transition Fund
GDP	Gross Domestic Product
MDB	Multilateral Development Banks
MFF	Multiannual Financial Framework
MITMA	Mobility and Urban Agenda
MF	Modernisation Fund
OP	Operation Programmes
PF4EE	Private Finance for Energy Efficiency
PSLF	Public Sector Loan Facility
PVs	Photovoltaics
RVO	Rijksdienst voor Ondernemend Nederland
RWS	Renovation Wave Strategy
SMEs	Small and Medium-sized Enterprises
UDFs	Urban Development Funds

List of relevant definitions

These definitions refer to the specific meaning of these words when used within this report. Some of these concepts applied in other context can have other meanings.

Asset financing	Asset financing refers to the use of assets or the assets of a company, including short-term investments, inventory and accounts receivable, to borrow money. The company or individual borrowing the funds must provide the lender with a security interest in the assets.
Blended finance	Combining grants with other financial instruments (loans, guarantees or equity) from the public and private sectors.
Community financing	It refers to financial arrangements and initiatives that involve the participation and support of a local community or group of individuals to provide funding or resources for various projects, businesses, or community development efforts. It typically relies on the collective contributions, collaboration, and shared responsibility of community members to meet the financial needs of a specific endeavour.
Commercial loans	A commercial loan is a debt-based financial arrangement between a company or individual and a commercial financial institution such as a bank.
Consumer loans	Consumer loan or personal loan refers to unsecured debt of smaller amounts. It is unsecured because it does not require a formal guarantee. However, financial institutions need to check the capacity of the borrower to pay back the loan
Contingent credit lines	Subordinated financing, funded or unfunded guarantees and contingent credit lines designed to enhance the credit quality/credit rating of the senior debt.
Corporate finance	In this report, corporate finance means when a corporate or company finance an investment. This financing can be external debt or external equity.
Credit rating	An estimate of the ability of a person or organization to fulfil their financial commitments.
Crowdfunding	Crowdfunding is a method of raising funds for a project or venture by collecting small contributions from a large number of individuals, typically through an online platform. It allows individuals or organizations to leverage the collective power of a crowd to finance their ideas, products, or initiatives.
Debt Financing	It is a method of raising financing for a company, organization or individual person by borrowing money from external sources, generally financial institutions.
Dedicated credit lines	Financial arrangements in which a lender provides a credit line to a financial institution to finance certain types of projects, in this case for building renovations.

De-risking tools or instruments	Financial mechanisms designed to reduce credit risks associated with an investment, in the case of this report refer to debt financing. Some common de-risking tools or instruments are insurance, hedging instruments, guarantees, diversifications, risk sharing, risk mitigation, etc.
Energy performance contracts	Energy performance contracts (EPCs) are a specific type of energy service contract that focuses on achieving energy efficiency improvements and guaranteed energy savings for a client.
Energy supply contracts	A business model based on the provision of energy, such as electricity or heat to a building owner or user, through a long-term contract.
Equity financing	Equity financing means that a company gets investment without obligation to pay interest charges. However, the investor (private or public) gets a share of the company and takes part in the decision-making process.
External financing	In the context of this report, external financing refers to obtaining debt financing or equity from outside sources to finance an investment.
Financing mechanism	Resources provided for a particular purpose that are expected to be paid back.
Funding	Resources provided by the EU for a particular purpose.
Grants	Grants are direct financial contributions awarded by way of a donation to third-party beneficiaries (usually non-profit-making organisations) engaged in activities that serve EU policies. Grants are based on the costs actually incurred by the beneficiaries for carrying out the activities in question, and the results of the action remain the property of the beneficiaries. European, national and regional public funds can generally be used to finance the project, subject to any specific conditions that may be attached to their use. Grants are focused on enabling economic and social improvement.
Green bonds	Green bonds are a type of financial instrument that are specifically issued to finance or refinance projects aiming at improving the environment, such as renewable energy or energy efficiency projects.
Green mortgages or Energy Efficiency Mortgages	Green mortgages, also known as energy efficiency mortgages (EEMs) or sustainable mortgages, are specialized mortgage products designed to incentivize and support energy-efficient and environmentally friendly home improvements or purchases.

Guarantee mechanism	Legally binding commitment made by one party (the guarantor) to assume responsibility for the financial obligations of another party (the debtor) if the debtor fails to fulfil their obligations.
Leasing	Leasing is a financial arrangement in which one party, known as the lessor, allows another party, known as the lessee, to use an asset in exchange for regular payments over a specified period. Leasing is commonly used for equipment, vehicles, real estate, or other tangible assets. There are different types of leases, notably financial and operating leases and they have different accounting implications.
Loan grace period	The grace period is the period from the date of the signature of the loan to the first repayment of the principal. It generally covers the construction period of the project.
Loan tenor and loan maturity	Loan tenor describes the duration or length of a loan agreement. They indicate the period over which the borrower is expected to repay the loan in full, including principal and any applicable interest. The loan maturity is the date on which the final payment of the loan is due.
Non-recourse debt	It is a type of loan or financing arrangement in which the lender's recourse for repayment is limited to the collateral securing the loan. In the event of default, the lender can only seek satisfaction from the specified collateral, and the borrower is not personally liable for any remaining debt.
On-bill financing	On-bill financing is a mechanism where financing repayments are made through an existing utility bill, normally the electricity bill. It has been used to finance energy renovations of buildings.
On-tax financing	On-tax financing is a mechanism where the repayment is via a special levy collected with the property tax bill. The repayments obligation is tied to a property and not its owner and it has been used to finance energy renovations in buildings
Preferential/Soft loans	Preferential or soft loans are types of loans that offer more favourable terms and conditions compared to standard market loans. These loans are typically provided by public institutions
Project promoter	Normally the entity responsible for identifying, developing, implementing and operating a project.
Risk-sharing facility	In the context of this paper, a risk sharing facility is a loss-sharing agreement between a financial institution (FI) and an institution that makes loans, in which the FI reimburses the institution for a portion of losses incurred on a portfolio of these loans. The facility can be remunerated or for free in the case that the costs

	are covered by the public sector. Therefore, these facilities are a type of guarantee.
Self-financing or own resources	Funding a project using internal funds or capital without relying on external sources of financing.
Senior loan	A senior loan is a type of debt financing provided by a financial institution or lender to a borrower, typically a company or project, with the highest priority or seniority in terms of repayment in the event of default or liquidation.
Subordinated debt/loan	Subordinated debt is an unsecured loan or bond that ranks below other more senior or securities with respect to claims on assets or earnings.
Specialized investment funds	Investment funds are investment products created with the sole purpose of gathering investors' capital and investing that capital collectively through a portfolio of financial instruments such as equity, debt and other securities to finance certain types of investments, like energy renovation in buildings.
Private equity	Private equity refers to investments made in privately held companies or non-publicly traded assets. It involves the purchase of equity or ownership stakes in companies by private equity firms or investors, to generate significant returns over a certain period.

1. Foreword

1.1. The Affordable Housing Initiative and the Consortium

The Commission's Renovation Wave strategy for Europe aims to green buildings, create jobs and improve lives. This strategy intends to at least double renovation rates in the EU by breaking down long-standing barriers to energy and resource-efficient renovation as well as improving reuse and recycling. By 2030, the construction sector could see 35 million renovated buildings and up to 160,000 additional green jobs.

The Affordable Housing Initiative (AHI) aims to make sure that social and affordable housing also benefit from the Renovation Wave. It will guarantee local social housing projects' access to required technical and innovation capacity and project support by:

- piloting the renovation of 100 'Lighthouse Districts' with a smart neighbourhood approach focused on liveability and innovation;
- providing blueprints for replication to show the way to other districts across Europe by tapping into existing best practices;
- mobilising cross-sectoral partnerships and linking them to local actors, such as social economy, SMEs, local authorities, housing associations and civil society;
- promoting efficient access and use of innovative processes such as circular and modular building as well as social innovation and engagement models to empower residents in the renovation process.

The AHI is linked to the New European Bauhaus Initiative as it echoes its core values of sustainability and inclusiveness. The approach of AHI combines design, climate, environment, accessibility, affordability and investment to help deliver the European Green Deal while ensuring a fair and just transition.

The European Affordable Housing Consortium (SHAPE-EU) acts as the first building bloc of the AHI. It has received funding from the European Union's Single Market Programme to support SMEs, public authorities and social and affordable housing providers – organized as "Local Industrial Partnerships" (LIPs) - in their planning and implementing integrated renovation projects at the district level.

The Consortium brings together 10 partners with European-wide reach and local technical expertise:

1.2. Structure of this Handbook

The objective of this handbook is to help housing providers, municipalities, SMEs and other relevant partners (henceforth "promoters") planning to renovate social and affordable housing, public or private, to prepare their financial strategy and find suitable sources of financing.

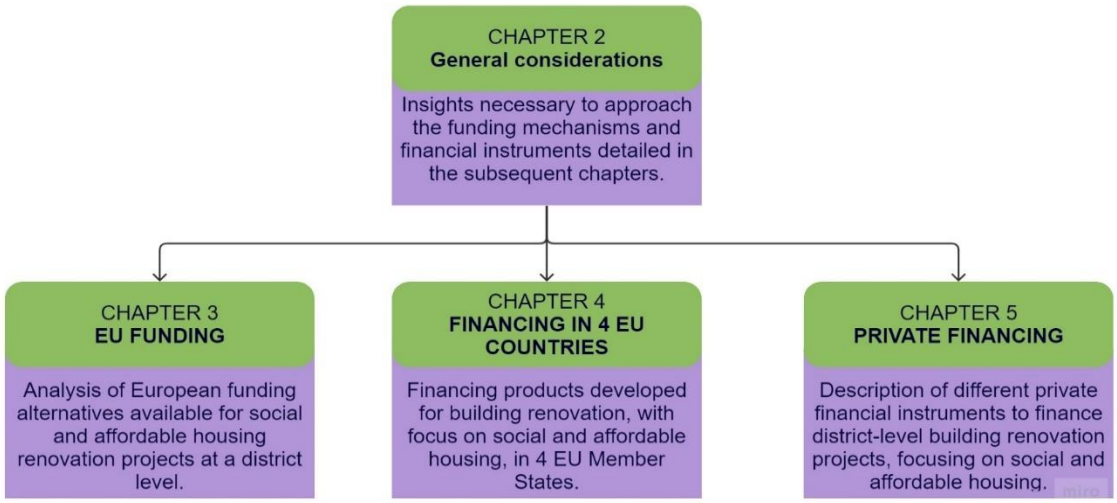
The handbook lays out the possibilities for financing social and affordable housing renovations, notably at the district-level. It critically enumerates the public (EU or in some Member States) or private available financing. For clarity, these were divided into the different possibilities afforded in the current policy landscape, including:

1. Direct investment,
2. Public funding to leverage private investments,
3. Public grants,
4. Debt financing,
5. Equity, and
6. Alternative schemes to attract private financing (such as project bundling, risk-sharing facilities, etc.).

The handbook also includes advisory services for project preparation and financial advice, namely through the EIB – Elena Facility, the European City Facility and the Technical Assistance of the European Energy Efficiency Fund. Within the aforementioned scope, it proceeds to provide valuable insights into the type of projects that can be financed, the financial products available and how housing providers, municipalities and SMEs can access them.

In order to provide a comprehensive insight into the financing sources detailed in this funding mapping, we present specific real-world cases as illustrative examples. These cases aim to offer readers a practical understanding of how particular financial instruments have been effectively utilized to fund specific projects. While the majority of these examples revolve around social housing renovation projects, in a few instances where specific cases related to social housing were unavailable, we have included instances focusing on energy-efficient home renovation projects. These additional cases serve as valuable references to demonstrate the practical application of the discussed mechanisms.

The handbook is divided in the following chapters:



2. Financing social and affordable housing: general considerations

2.1. Introduction

Financing social and affordable housing renovations is characterised by considerable complexity, at least to the untrained eye. The purpose of this chapter is to lay the groundwork for the same promoters to navigate the financial landscape with increased clarity. In that sense, this chapter should not be overlooked, as it equips social and affordable housing owners with the foundational knowledge to understand the funding mechanisms and financial instruments detailed in subsequent chapters. The information herein will inform housing owners of the different choices that will come up while devising a financial strategy for their renovation projects.

The chapter begins with an outline of the common challenges and barriers that frequently hamper the financing of social housing projects. These hurdles are related to (i) the **heterogenous quality of social and affordable housing** provision in Europe, and (ii) to the fact that financial institutions apply **demanding eligibility criteria that should be heeded** – which frequently do not take into consideration the specificities of the sector. Acknowledging this and proceeding with effective preparation of the project against those criteria, is the first step towards succeeding in financing the project. We underscore the significance of meticulous project planning and the conduction of pre-feasibility studies—as key processes that underpin a successful financing strategy.

Further, we explore the nuanced demands that different levels of renovation exert on financial planning. Understanding this relationship is essential for developing a robust financial framework that aligns with project goals and sustainability standards. Lastly, we provide a primer on the diverse sources of funds available, clarifying the distinctions and potential of each one from the perspective of the promoters in making informed financial choices.

Hopefully, at the end of the chapter, the promoters will have sufficient insight into the complex financing world of social and affordable housing renovation and information to capitalize on the opportunities presented within a heterogenous array of financial possibilities.

2.2. Financing social and affordable housing renovations – challenges and barriers

The ability to obtain repayable finance for building renovations primarily depends on the property owner's creditworthiness. Securing funding for renovations in social and affordable housing often involves a complex process, especially if the owner's financial stability is uncertain. The nature of property ownership in social and affordable housing is also key in this respect. It is quite diverse throughout Europe, encompassing several forms, such as:

1. Owner-occupiers
2. Private rental housing owners
3. Public rental housing
4. Housing cooperatives
5. Social (non-profit) rental housing organizations
6. Multi-ownerships schemes

The tenure structure in the social and affordable sector is highly different between European Union member countries. Ownership rates vary between a region of a single state. Figure below show the difference between some countries.[1]

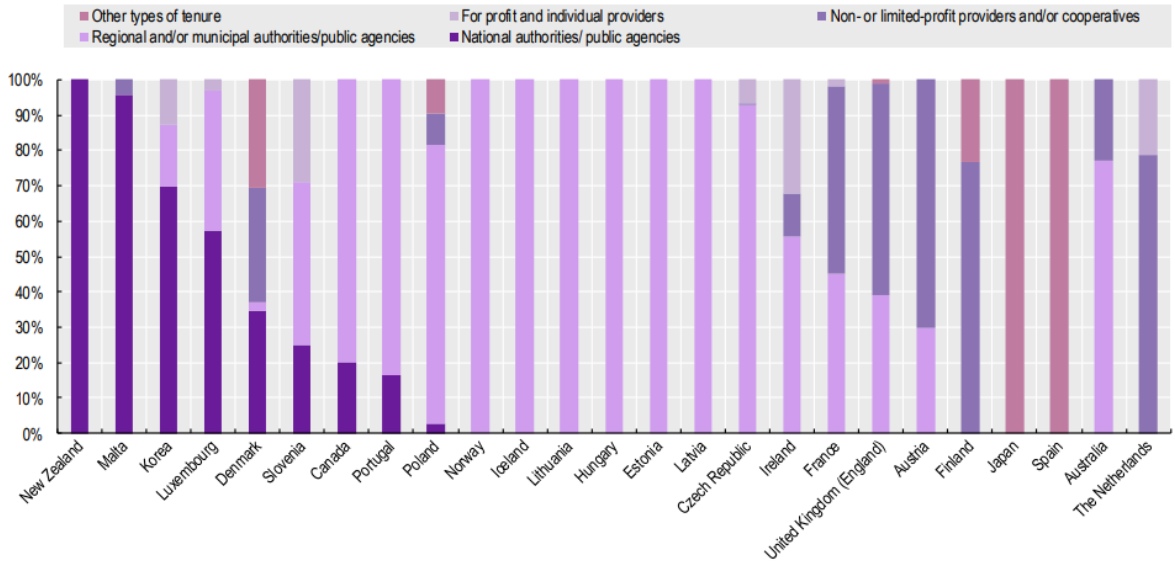


Figure 1 - Social housing providers vary considerably across and within countries. Share of total social rental housing stock by type of provider, 2018 or latest year available.

Each type of owner encounters **distinct financing challenges**. Common barriers such as limited repayment ability and lack of understanding about financial mechanisms for

[1] OECD (2020), "Social housing: A key part of past and future housing policy", Employment, Labour and Social Affairs Policy Briefs, OECD, Paris http://oe.cd/social-housing-2020.

renovations are widespread. However, some challenges are specific to the type of owner. For instance, public housing authorities often encounter additional regulatory hurdles. In contrast, owners managing multiple properties typically have broader financial options and more straightforward access to funding compared to individual low-income homeowners.

Creditworthiness and the ability to repay loans are contingent upon effectively managing debt, treasury, and liquidity management by housing owners. Sound financial practices and sufficient liquidity to meet current and future obligations are crucial for securing repayable finance. Yet, the constrained revenue-generating capacity of social and affordable housing owners often presents a significant obstacle in accessing diverse financing options.[2]

In the domain of private financing, such as bank loans, post-2009 regulatory capital requirements and fiscal measures aimed at reducing systemic risks in housing loans have tightened borrowing options for property owners. Stricter exposure limits, risk weight assessments, and caps on debt maturity have led to reduced availability of funds and higher debt costs in the housing sector.[3] As a result, owners of social and affordable housing often face limited and costlier resources from private markets for their renovation projects.

Securing funding or renovations is particularly challenging for l**ow-income or impoverished owner-occupiers** compared to single entities like public or private rental housing providers. A major challenge in promoting district-level renovations for these individual homeowners is ensuring access to affordable financing options and encouraging them to invest in energy-efficient renovations, which can yield long term benefits.

Typically, low-income owners-occupiers have limited funds and often hesitate to invest in energy-efficient upgrades. They tend to prioritize immediate and visible improvements such as kitchen and bathroom renovations, over energy-related ones that offer long term benefits but may not be perceived as immediately impactful to their living conditions.[4] This reluctance to incur additional debt for renovations stems from their limited borrowing capacity, leading them to avoid any non-critical financial commitments—a phenomenon often referred to as "debt aversion."[5]

For these owner-occupiers, savings and informal loans are the primary source of funding, often leading to renovations being postponed until sufficient funds are accumulated or grants

[2] Moody's investors service; "European Social Housing providers", 2018

[3] Valderrama, L; Gorse, P; Marinkov, M; Topalova, P; "European Housing at turning point. Risks, households and bank vulnerabilities, and policy options", International Monetary Fund, WP/23/76, 2023

[4] J.Alario, Les investissements pour la rénovation énergétique des bâtiments en Europe. Op. cit.

[5] Giraudet L.-G., Bourgeois C., Quirion P., Policies for low-carbon and affordable home heating: A French outlook. Energy Policy 151 (2021).

become accessible.[6] Although options like consumer loans and public financing are sometimes considered, they are limited in availability. Given the financial instability and uncertainties such as unemployment risks, grants and subsidies, with their non-repayable nature, often serve as a crucial support mechanism.

Affordable loans with extended payback periods are vital, as they allow homeowners to cover expenses that exceed what savings and grants can provide. Programmes like Bilbao's Opengela project illustrate the success of tailored loan programmes for low-income neighbourhoods. Despite rising interest rates present new hurdles, EU initiatives such as the EU's Recovery and Resilience Facility provide some financial relief.

Historically, public social housing entities have funded their renovation projects using a mix of internal resources, public grants, and both concessional and competitive public financing, with additional support from tenant contributions.[7] Yet, the **financial crisis of 2008** prompted a shift towards private financing as public funds dwindled. This shift also echoes in the strategies of private owners of large affordable rental properties, although their access to concessional finance is typically more restricted compared to that of public entities.

National fiscal policies often place debt ceilings on public rental housing, potentially constraining district-level renovation projects. Such fiscal constraints can hamstring local authorities, impeding their ability to finance and execute social and affordable housing renovations due to limited budgetary resources.

The economic advantages of district-level renovations are accentuated by economies of scale, potentially leading to more favourable financing conditions such as lower interest rates. This benefit is particularly pronounced in **large-scale projects**, which can reduce risk and associated costs for financiers. For low-income individual homeowners, reaching a collective agreement on renovation investment poses a challenge. This necessitates creative financial solutions to ensure renovations are affordable for all involved parties.

Financing for housing associations overseeing **multi-family buildings** is challenging, primarily due to financial risk, such as the potential for non-payment. Additionally, the intricate **legal and ownership structures** of such properties often discourage financial institutions from engaging or, in other words, increase the risk premium, which makes the loan financially unsustainable. Only a handful of institutions are equipped to deal with these intricacies. It's essential for promoters to recognize and understand the requirements of those institutions willing to finance housing associations, and to account for the legal and regulatory landscape that may affect borrowing capabilities.

[6] European Commission, Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU, November 2019

[7] House Europe, CDC, Le financement de la rénovation dans le secteur du logement social: Une étude comparatif dans 6 pays européeens

2.3. Importance of planning projects adequately and conducting pre-feasibility plans

Pre-feasibility studies are key to achieve optimal outcomes in projects, especially in determining the financing and implementation strategies. Informed decision-making is facilitated by conducting thorough studies and project planning. Typically, these feasibility studies should adopt a **business case** approach to accurately inform the final investment and financing decisions. For district-level social and affordable housing renovation projects, feasibility studies are key part of both project planning and financing plan, especially in the case of projects that can be financed through repayable funding sources.

For a thorough understanding of the complexities and requirements of district building renovation projects, it is important for promoters to conduct a comprehensive feasibility study. This study serves to elucidate the **technical, legal, financial, and socio-environmental** aspects of the project, providing a high-level analysis of its main features. Its purpose is to help promoters to understand the required investment and its potential returns, as well as to estimate the extent of energy performance enhancement required, complying with the minimum requirements of the Energy Performance of Buildings Directive —a factor that could substantially influence the overall investment.

Once the feasibility study is concluded, a **financial plan** is required to determine funding needs, taking into account available resources and grants. This will lead to the creation of a tailored financing strategy for the district renovation, pinpointing the optimal financing sources, with an emphasis on public financing avenues. Since financial institutions place significant emphasis on borrower creditworthiness, this factor will influence the financial proposals obtained, whether through either formal or informal bidding processes.

As a final note, this process also shows how important it is for the promoter - housing provider, municipality or other - to speak in the **language** of the financial institution. Having these processes, and documentation at hand, can go a long way towards convincing the grant / borrower institutions that the investment is sound, and even reducing the interest rate.

In order to assist both public and private entities in developing robust feasibility plans for projects and ensuring their financial viability, several initiatives, such as the European Local Energy Assistance (ELENA), have been established. ELENA is a collaborative effort between the EC and the EIB that is explained in detail in section 3.5.1 of this report. This type of initiatives aims to offer technical support to project promoters, whether they are from public or private institutions, with the objective of helping them efficiently plan and execute large-scale, financially sustainable energy investments.

The underlying principle of these initiatives is to optimize the utilization of public funds, facilitate the aggregation and execution of large-scale projects, and reduce the risk associated with energy efficiency building projects.

2.4. The impact of the renovation extent in the financial planning

The scope and cost of renovating buildings can escalate significantly, particularly for deep energy renovation designed to substantially improve the building's **Energy Performance Certificate** (EPC). Such comprehensive renovations, while capital-intensive, are essential for achieving greater energy efficiency and sustainability. In recognition of the higher upfront costs, governments often offer larger grants to encourage such ambitious projects.

The feasibility of deep renovation projects is not solely reliant on initial investment but also on their **long-term financial advantages**, primarily derived from energy savings that can offset the initial expenses. Accurate assessment of these potential savings requires thorough energy audits. These audits provide project promoters with the ability to forecast energy savings in monetary terms, paving the way for projects that are financially self-sustaining or cost-neutral in the long run. This approach is detailed in the **European Affordable Housing Consortium's** "**Blueprints for Replication**" (financial chapter)[8] which provides strategies to equate the costs of deep energy renovations with savings from reduced energy bills and other operational expenditures, leading to financially viable renovation projects without additional long-term costs.

Securing financing for removable energy production equipment, such as rooftop photovoltaic (PV) panels, can occasionally be more straightforward thanks to specialized financial products such as leasing or energy supply contracts. These options are appealing because they provide a mechanism for recovery in the event of non-payment. Nonetheless, accessing such financing methods is contingent upon a rigorous assessment of the client's financial health. Clients with limited ability to make repayments may find access restricted. Additionally, these financial arrangements are often intricate, binding clients to long-term obligations and imposing substantial penalties for early contract termination.

Energy Service Companies (ESCOs) offer an alternative approach, facilitating the financing of energy renovations, including but not limited to energy production, through energy performance contracting. This arrangement is less common for residential buildings, with a few exceptions such as France's Third-Party Financing companies, which actively finance energy renovations for houses.[9] In this model, ESCOs and Third-Party Financiers alleviate the financial load for homeowners by covering the initial costs, which are then recouped over time from the resultant energy savings. This structure simplifies the renovation process for households and promotes the wider implementation of energy-efficient upgrades.

[8] https://shape-affordablehousing.eu/guidelines-to-create-thriving-districts/

[9] For more details see ORFEE initiative (https://orfee-project.com/index.php/en/home/)

Financing district-level renovation projects for social and affordable housing, particularly those incorporating heating and cooling networks, involves a distinct financial landscape. While corporate financing from both public and private sectors has traditionally been the mainstay for such utilities, finding direct lending options for these specific types of projects is relatively unusual. However, public funds and grants from government initiatives are pivotal, offering competitive financial options tailored to the needs of heating and cooling networks of district-level renovations that aim to improve energy efficiency and resident comfort. These grants are particularly valuable for projects that include the installation of renewable energy systems like photovoltaic arrays, as they offset the initial investment costs and support the overarching goal of enhancing the sustainability of social and affordable housing.

The practice of bundling projects offers a remarkable avenue for harnessing economies of scale, fostering the development of large-scale initiatives, attracting a wider spectrum of investors, and mitigating planning challenges. Depending on their unique attributes, such as investment magnitude, geographical location, or the technology to be deployed, individual projects can be consolidated into larger, more cohesive endeavors. This bundling strategy serves to diminish associated risks, enhance their financial viability, instill greater confidence among investors, and expedite project implementation timelines. Under the Horizon 2020 programme some projects focused on budling of energy efficiency renovation projects have been financed. This is the case of BundleUP and BEenerGI.

2.5. Capital Sources

Financing social and affordable housing renovations is a multifaceted challenge that involves an array of finance sources. Typically, there are three types of capital sources for these renovations: - **own resources**, **non-repayable** aids like grants, subsidies, and tax benefits—and **financing sources** that involve repayable instruments such as loans and bonds. As illustrated in Figure 1, within these funding and financing sources, a range of mechanisms exists to support the financing of social and affordable housing renovations:

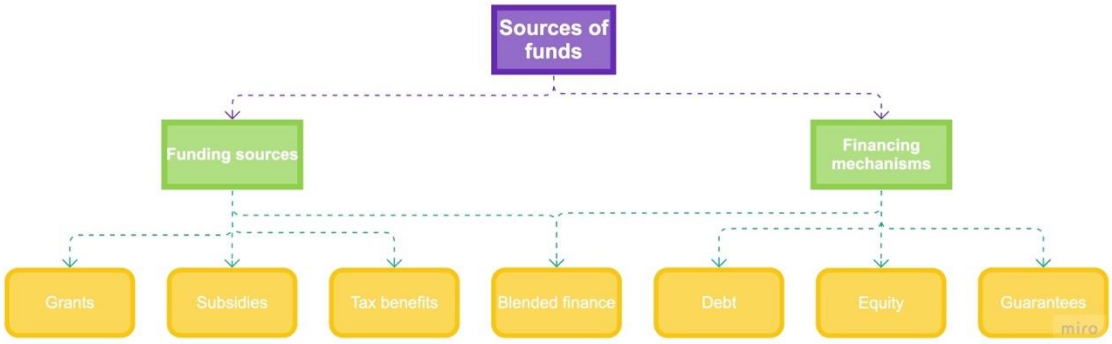


Figure 2 - Common sources of funds

These mechanisms serve dual roles: they either establish a debt-free foundation for renovation projects in the case of funding sources or they form the repayable financial backbone crucial for larger scale endeavours. Each mechanism comes with distinct terms, benefits, and accessibility, some of them will be expounded upon in subsequent chapters 3, 4 and 5.

Funding sources, including grants and subsidies that do not require repayment, lay a financial foundation for renovations without incurring debt. These funds may originate from government, international organizations, or charitable foundations dedicated to improving housing conditions. Tax credits for energy-efficient renovations effectively reduce the overall cost of the project by providing euro-for-euro reduction in the tax liability of the entity undertaking the renovation. In-kind contributions, including donated materials or volunteer labour, also fall under non-redeemable sources decreasing the financial barrier to carrying out necessary improvements. These non-repayable funds are particularly valuable for non-profit housing providers, as they help to maintain affordability for residents while upgrading the housing stock.

Repayable financing is crucial as well in supporting the renovation of social and affordable housing. These sources typically encompass debt in a range of loans and mortgages that require repayment over time, usually with interest. For instance, low-interest or subsidized loans from government programmes or financial institutions can provide the necessary capital for renovation projects while minimizing the financial strain on housing associations. Additionally, green bonds and energy performance contracts can be effective, with future energy cost savings helping to the repayment of the borrowed funds.

Additionally, credit lines from community development financial institutions (CDFIs) or revolving funds specifically established for housing renovations can offer flexible repayment terms, aligning with the expected cost savings from the upgrades. However, these sources of redeemable finance are particularly challenging for low-income homeowners, who typically only have access to consumer loans or different forms of personal debt, ranging from credit cards to second mortgages, which are expensive and have short tenors[10]. To bridge this gap, innovative solutions like green mortgages, on-tax financing, and on-bill financing are emerging, providing more accessible and affordable pathways to finance renovations.

In the field of social housing renovation, **financial instruments** that mitigate risk serve a dual purpose: not only they provide financing but also act as safeguards against the uncertainties of future market events. Public guarantees, for instance, are instrumental in reducing the financial risk tied to the energy renovation of social housing units. These guarantees, tailored to encourage investments in energy efficiency within the social housing sector, are critical in developing markets. Their importance is underlined by the initial hesitancy of financial institutions to engage with what they perceive as high-risk areas. Soft loans and public guarantees, designed to support the social housing market by making energy renovations more appealing to investors, will be discussed in chapter 3.

Figure 2 illustrates various financing schemes available for social and affordable housing renovations and identifies which type of owners are eligible for each scheme. It highlights that these financing options typically require substantial minimum investments, which are further discussed in Chapters 3 and 5, detailing the specifics of accessing these mechanisms. As a result, entities undertaking large-scale renovation projects are well-positioned to leverage most of these financial resources due to the substantial nature of their investments. In contrast, smaller-scale renovators, like individual low-income households, may face constraints due to their projects not meeting the high financial thresholds set by these financing mechanisms.

[10] Length of time of the financial contract.

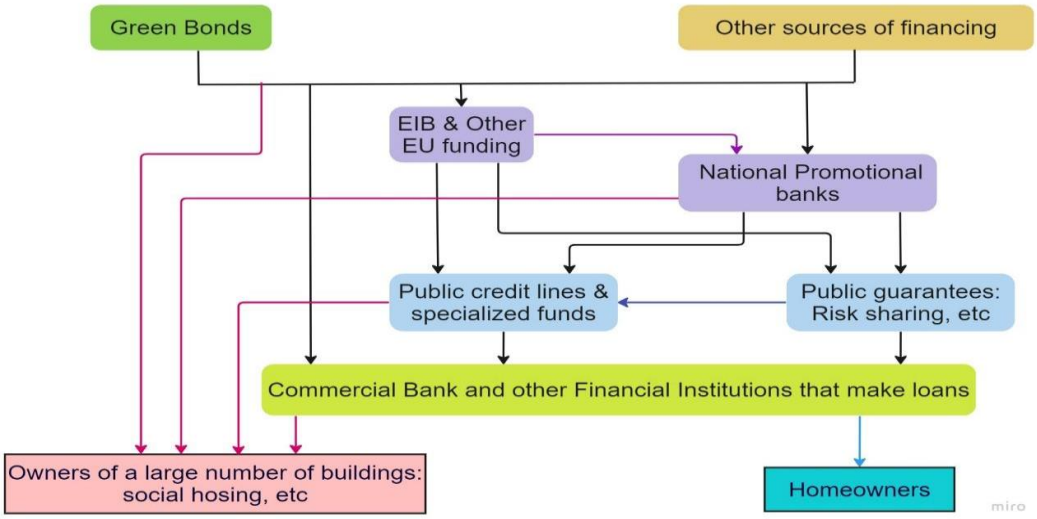


Figure 3– Beneficiaries of most common sources of financing mechanisms for building renovations

As depicted in Figure 2, entities that own a significant portfolio of buildings are better positioned to directly benefit from EU or national funding programmes. Their **larger scale typically provides the financial leverage and administrative capacity** necessary to self-finance through mechanisms like bond issuance, which are detailed in Figure 1.

Conversely, smaller investors typically lack the substantial capital or resources required for direct funding avenues. Instead, they tend to rely on public funding, accessible through credit lines or specialized funds backed by EU initiatives or national budgets, which feature more attainable capital thresholds. Both large and small-scale investors have access to private finance, with options ranging from corporate finance for substantial investors to consumer loans for smaller ones, all obtainable through commercial banks and other financial entities.

3. European Union funding for social and affordable housing renovations

3.1. Introduction

In this chapter, we present a mapping analysis of European funding alternatives available for social and affordable housing renovation projects at a district level. The mapping exercise is structured to assist social and affordable housing providers and local authorities in navigating the intricate landscape of financial support offered by various European programmes.

The European Union provides a substantial framework for financing social and affordable housing renovations, yet navigating this complex array of financial support remains a formidable challenge. Understanding the available financing and the pathways to access it is crucial for housing providers and local authorities seeking to renovate their housing stock.

The EU funding distributed through different programmes can be classified on three types of implementation modes depending on the management of the funds. In the direct management the EC is directly responsible for all the implementation of the programme. These activities can be carried out by the EC's departments, its delegations or through the executive agencies. One example of a direct management programme is the Single market Programme (SPM). The second implementation type is the shared management where the EC and national authorities of Member States run together a particular programme. Around 70% of the EU programmes are implemented this way. The last implementation mode is the indirect management which are full implemented with the support of national authorities or international entities.

It is important to remark as well that EU funding can be distributed in various forms, from grants - delivered by public bodies in line with cohesion policy -, to loans - facilitated through EU institutions, notably the European Investment Bank group, as well as by national promotional and commercial banks-, as well as specific financial vehicles such as investment funds.

EU funding is intrinsically linked to **supporting EU policies**, making it essential to thoroughly understand these policies to identify eligible investments and projects. With the EU's emphasis on sustainability, policies like the European Green Deal, the Urban Agenda for the EU, and initiatives such as the Renovation Wave have a significant impact on funding priorities, particularly for the renovation of social and affordable buildings. The current prioritization of energy renovation within the EU's policy framework indicates the high value placed on this area, which is reflected in specific climate targets set within the Cohesion Funding and the European Regional Development Fund.

This document explains the process of accessing EU funding for social housing owners aiming to renovate buildings and for entities focused on affordable private buildings renovation. The primary source of EU financing for building renovations is delineated by the Multiannual Financial Framework (MFF), spanning from 2021 to 2027 with a budget of €1.21 trillion in current prices. Complementing the MFF, the NextGenerationEU with a total budget of €806.9 billion serves as a temporary instrument designed to bolster COVID-19 recovery efforts.

Moreover, the MFF catalyses additional funding through national co-financing, the EIB, national promotional banks, and International Financial Institutions (IFIs). Notably, the EIB offers financing through initiatives and programmes backed by the EIB capital from EU member states and the MFF, such as the InvestEU initiative, which illustrates the kind of support available through these programmes. This chapter provides a detailed description of each EU funding source relevant to social and affordable housing renovation. It analyses the scope of building renovation projects that qualify, with a specific lens on social and affordable housing—detailing objectives, eligibility criteria, financing types, accessibility, and application procedures.

EU funding covers a spectrum from grants, loans, equity, to technical assistance. Project promoters bear the responsibility of identifying the most suitable EU financing option for their projects. Advisory services provided by the EU can assist in identifying alternatives, aiding in project preparation, and formulating financial strategies.

As the EU funding landscape for the renovation of social and affordable housing is subject to evolve, it is imperative for promoters to stay abreast of the latest developments in this sector. This document aims to be an authoritative guide in this evolving landscape, providing the knowledge and tools essential for leveraging EU financing to its fullest potential. However, it is inevitably a picture in time, and the information contained herein is valid for a limited time only, as new policies and funding sources are made available, and other cease to exist.

In this document, we explore various funding mechanisms, each with its unique attributes and potential benefits for social and affordable housing renovation projects. The document is organized into five key sections, each dedicated to a different aspect of funding:

1. **Repayable Finance**: This section delves into EU repayable financial options that can be made towards housing renovation projects. We examine how these instruments are structured, their objectives, and how they can be used for of housing projects.
2. **Funding to Leverage Private Investments**: Here, we explore options that use public or European funds to attract and leverage additional private investment. This approach often involves creative financial structuring, including the use of public funds as guarantees or seed capital to encourage private sector participation.
3. **Grant Schemes**: This part of the document focuses on grants available specifically for housing renovation. We provide insights into the application process, eligibility criteria,

and how these grants can be effectively utilized to cover various costs associated with renovation projects.

4. **Technical Assistance Facilities**: Lastly, we cover the technical assistance facilities that are crucial for the planning, development, and implementation of housing projects. This includes guidance on accessing expert advice, feasibility studies, project management support, and other forms of technical aid that are essential for successful project execution.

Each section provides a comprehensive examination of the respective funding mechanism, offering clarity and insight into their application in the context of social and affordable housing renovation. By dissecting these mechanisms, we aim to present a clear and thorough guide to assist housing providers and local authorities in identifying and accessing the most suitable funding options for their projects.

The structure of the document follows a systematic approach for each funding alternative explained. Initially, we provide a 'General Description' to establish a foundational understanding of each funding type. This is followed by an exploration of the 'Opportunities for Social and Affordable Housing Renovation', where we delve into the applicability and benefits of these funding alternatives in the specific context of housing renovation projects. Lastly, the 'How to Apply' section is designed to guide the reader through the application process, making these funding opportunities both accessible and practical for projects.

Our aim is to supply promoters with the necessary knowledge and tools to effectively utilize European funding alternatives, thereby contributing to the development and improvement of social and affordable housing in their districts.

3.2. Repayable finance

3.2.1. Recovery and resilient facility (RRF) loans

General description

The Recovery and Resilience Facility (RRF) is a key pillar of NEXTGenerationEU, designed to bolster economic recovery post-COVID-19 and to support the REPowerEU Plan in response to the energy impact of the Russian invasion of Ukraine. This transitional funding instrument, operational until the end of 2026, aims to enhance the sustainability and digitalization of Member States economies and address country-specific challenges. Boasting a budget of €723 billion, of which €385.8 billion are in loans and €338 billion are in grants, the RRF is a significant financial tool.

The EC was allowed to grant until the 31st of December of 2023, upon request of the Member State, a loan for the implementation of their recovery and resilience plan. To request a loan, Member States must submit a recovery and resilience plan detailing reforms and investments aligned with EU priorities, like the green transition and digital transformation. They had to explain the reasons why a loan was required for the implementation of their recovery and resilience plan justifying the higher financial needs. Plans were evaluated based on criteria including their contribution to the RRF priorities, cost-effectiveness, and coherence. Loans are contingent on meeting these criteria and the implementation of specific milestones and targets. The funds should be used for investments and reforms that have a lasting impact on the economy and society, supporting the green and digital transitions.

Opportunities for social and affordable housing renovation

RRF funds can be used for all types of projects that contribute to one of the following pillars:

1. Green transition – at least 37% of the budget allocated to this topic.
2. Digital transformation – at least 20% of the budget allocated to this topic.
3. Smart, sustainable, and inclusive growth
4. Social and territorial cohesion
5. Health and economic, social and institutional resilience
6. Policies for the next generation

For social housing, the RRF offers a chance to significantly improve energy efficiency standards. Approximately 7% of the RRF funds have been invested in social housing initiatives so far, demonstrating a commitment to this sector.[11] Box 1 presents an example of how these funds have been utilized for social housing purposes.

[11] Retrieved from: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/social.html

Box 1: Spanish Energy-Efficient Social Housing Construction Programme

This initiative, integral to the Spanish Resilience and Recovery Plan, is a key part of the country's effort to enhance its housing stock. Aligned with the second component of the Housing Rehabilitation and Urban Regeneration Plan, the programme's goal is to boost the construction of new, energy-efficient social rental housing units. With an investment target exceeding €15 million for the entire Plan, of which €10 million is sourced from the Recovery and Resilience Facility, the programme is set to make significant strides in increasing Spain's energy-efficient social housing offerings.[12]

How to apply

RRF funds are directly managed by the EC. The RRF is a performance-based facility which means that funds are released only once set milestones are achieved. Access to RRF loans is exclusive to EU governments, which must present national resilience and recovery plans encompassing proposed projects[13]. Governments have the flexibility to revise and resubmit their plans to ensure they align with evolving goals. The Recovery and Resilience Facility regulation outlines the conditions for receiving loans, the application process, and how funds can be used.

Housing Europe produced a report on how countries are using the RRF funds to carry out their housing projects[14].

[12] To get more information: https://planderecuperacion.gob.es/politicas-y-componentes/componente-2-plan-de-rehabilitacion-de-vivienda-y-regeneracion-urbana

[13] Information about all countries that have submitted the plan can be found here: https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

[14] The report is accessible here: https://www.housingeurope.eu/resource-1635/impact-of-the-recovery-plans-on-the-social-and-affordable-housing-sector

3.2.2. Just Transition Mechanism

General description

The Just Transition Mechanism (JTM) is a pivotal initiative designed to support European regions grappling with the shift towards greener economies. With a focus on 112 level III regions from the Nomenclature of Territorial Units for Statistics (NUTS3) it aims to cushion social, employment, and environmental impacts. Member States, subject to the European Commission's approval, have the autonomy to pinpoint territories that will benefit most from this transition. The JTM is bolstered by the EIB and encompasses the Just Transition Fund (JTF), the InvestEU 'Just Transition' scheme, and the Public Sector Loan Facility (PSLF).

1. The **Just Transition Fund (JTF)**, with €19.2 billion allocated, seeks to stimulate €25 billion in investments. Its objectives include supporting workers' reskilling, helping small businesses adapt, and funding clean energy projects.
2. The **InvestEU 'Just Transition' scheme** (InvestEU JTS) provides guarantees and advisory support to stimulate investment in the affected regions, promoting economic diversification and conversion of industrial sites. The InvestEU JTS can be implemented through any InvestEU financial products under the four policy windows regulating the InvestEU Fund that are explained in the section 1.3.2 of this report.
3. The **Public Sector Loan Facility (PSLF)** combines €1.52 billion in grants with €10 billion of EIB loans, offering financial terms that are favourable to public sector projects contributing to the transition, with an additional €35 million for advisory support.

Opportunities for social and affordable housing renovation

Social and affordable housing projects within these regions can leverage the JTM for renovations that not only enhance living conditions but also contribute to broader climate goals. The JTM is poised to address the transition challenges in carbon-intensive regions. These instruments, particularly the JTF and PSLF, present opportunities for social and affordable housing projects focused on energy efficiency and renewable energy integration, aligning with the JTM's commitment to environmental sustainability and social equity.

How to apply

Accessing JTM support requires Member States to formulate territorial just transition plans specifying the intervention areas for JTF funds. These plans, once ratified by the EC, enable regions to tap into the JTM and its three facilities. The Just Transition Platform facilitates this process, providing the necessary guidance and resources to ensure effective application and utilization of funds.[15].

15 https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform_en

The JTM operates through a system of shared management, wherein both the European Commission and each Member State must adopt a Partnership Agreement. Once these agreements are in place, national and regional authorities take on the responsibility of selecting the specific projects to receive funding. For any inquiries related to an individual country's plan, it is advisable to reach out to the designated Managing Authorities. These authorities are tasked with providing information about specific programs, selecting projects, and monitoring their implementation.

In order to assist Member States and regions in achieving a fair and equitable transition that leaves no individual or area behind, the Just Transition Platform has been established. This webpage serves as a comprehensive resource hub, housing valuable information about Working Groups and available funding opportunities. Its primary objective is to ensure that all pertinent stakeholders possess the requisite information and knowledge necessary to facilitate a just transition towards a sustainable, climate-neutral economy. The platform also provides a detailed list of regions eligible to benefit from the JTM.

3.2.3. Modernisation Fund

General description

The Modernisation Fund (MF)[16] is a key instrument aimed at supporting 10 lower-income EU Member States in expediting the transition to climate neutrality, in alignment with the objectives set forth in the ETS Directive, the Union's 2030 climate and energy policy framework, and the long-term aspirations articulated in the Paris Agreement. The MF extends direct financial support to these countries, empowering them to invest in projects that adhere to stringent criteria.

Ten Member States stand to benefit from the MF, namely **Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia**. The allocation of resources from this fund has already been designated as percentages to these ten countries.

In an effort to guarantee the commercial viability of investments and their substantial contribution to the 2030 climate targets, investment proposals must incorporate well-developed technologies. Essentially, the proposed technologies should have a track record of successful implementation and proven effectiveness in operational settings with comparable conditions, scale, and reliable references.

Investments that meet the Modernisation Fund's criteria but do not fall within the specified priority areas are categorized as "non-priority investments." In such cases, the Modernisation Fund can provide financial coverage for up to 70% of the associated costs, contingent on the condition that the remaining costs are sourced from private funding.

Opportunities for social and affordable housing renovation

Seventy percent of the fund's resources designated to each Member State must be used for "priority investments," which encompass the following key areas:

1. Generation and utilization of **electricity from renewable sources**.
2. Enhancement of **energy efficiency**, spanning sectors like transport, **buildings**, agriculture, and waste, with the exception of energy efficiency related to energy generation using solid fossil fuels.
3. Advancement in **energy storage** capabilities.
4. Modernisation of **energy networks**, which includes **district heating** pipelines and electricity transmission grids, along with increasing interconnections among Member States.

Support for a just transition in regions dependent on carbon-intensive industries in the beneficiary Member States. This support extends to the redeployment, re-skilling, and up-

[16] https://modernisationfund.eu/

skilling of workers, educational initiatives, job-seeking programmes, and start-up initiatives, all conducted in collaboration with social partners.

The most recent disbursement decision by the MF was made in May 2023, resulting in the funding of several projects. In Lithuania, for instance, a portion of the resources has been earmarked for the renovation of multi-apartment buildings. Meanwhile, in Romania, a segment of the budget has been allocated to support new renewable electricity production, district heating enhancements, and the replacement of gas infrastructure.

The Modernisation Fund offers an ideal avenue for Member States to prioritize and fund social affordable housing renovation projects. This suitability arises from the fact that the fund mandates that seventy percent of its resources must be directed towards 'priority investments,' including enhancements in energy efficiency and modernization of energy networks, which encompass crucial aspects of housing renovation. The most recent disbursement decision in May 2023 further underscores this suitability, as it allocated resources for projects like the renovation of multi-apartment buildings in Lithuania, highlighting the fund's flexibility in addressing vital social and environmental objectives.

How to apply

The Modernisation Fund operates under a share management system where Member States in cooperation with the EC and the EIB decide how to use the funds. Member States are responsible for identifying and selecting the investments they intend to propose for support from the Modernisation Fund. Subsequently, only Managing Authorities of Member States can submit their investment proposals to the EIB, the EC, and the Investment Committee at any point during the year.

Upon submission, the EIB conducts an initial assessment to determine if the proposal meets the requirements for priority status consideration. Following this assessment, the EC evaluates the proposal to confirm its eligibility. Once the investment is confirmed, the disbursement process is initiated. In the following link the confirmed and recommended investment proposals in the beneficiary Member States can be found.

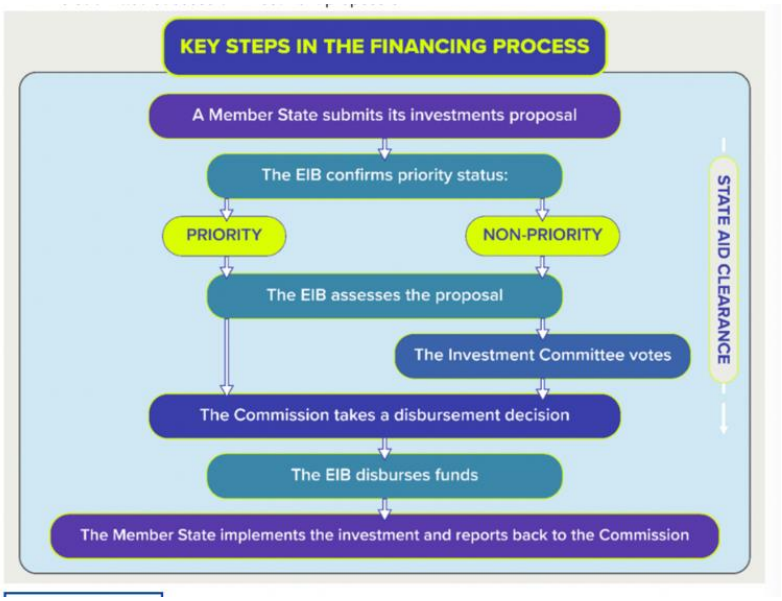


Figure 4 - Key steps in the financing process

3.3. Funding to leverage private investments

3.3.1. Cohesion Policy Sectoral Financial Instruments (FI)

General description

Cohesion Policy funds offer a flexible approach to allocating resources, enabling Member States to establish a variety of sectoral Financial Instruments (FI). These instruments serve as alternatives to traditional grants and are particularly valuable when investments have the potential to generate financial returns or cost savings that can be used to repay the initial investments. Financial instruments can be settled in the form of diverse financing options, from equity investments to senior loans, and can be effectively blended with grant funding.

Traditionally, grants have been the primary support for energy efficiency enhancements in buildings,[17] while the uptake of Cohesion funds for FIs has been minimal.[18] However, there are notable examples of successful FIs use, such as the initiatives to finance energy renovations of multi-family buildings in Lithuania (see Box 2).

Box 2: Financing of social housing in Lithuania

Social housing is mostly **financed by cohesion funds**. For the period 2014–2020 of cohesion funding, €58.7 million were set aside for projects to expand social housing, of which €49.9 million comes from the ERDF and €8.8 million from **municipalities' resources**[19]. Under the current programming period 2021-2027, the estimated needs for social housing (purchased, built and reconstructed) from cohesion funding is estimated at EUR 90.8 million[20]. The aim is that the waiting list for the most vulnerable groups does not exceed 3 years.[21]

The discretion of national managing authorities to designate Cohesion Funds towards building renovations, whether through grants or FIs, is pivotal. The EC endorses FIs as a cost-effective use of EU funds, particularly for building renovations. FIs not only leverage private capital but also promote sustainability and enhance the quality of projects.

[17] From European Court of Auditors, Energy efficiency in buildings: greater focus on cost-effectiveness still needed. 2020

[18] FiCompass, Stocktaking study on financial instruments by sector Progress to date, market needs and implications for financial instruments. 2020.

[19] EUROPEAN SOCIAL POLICY NETWORK (ESPN). Op cit.

[20] LITHUANIA, ANALYSIS OF THE SOCIAL HOUSING SITUATION. Ministry of Social Security and Labour, 10 April 2020

[21] To get more information: https://planderecuperacion.gob.es/politicas-y-componentes/componente-2-plan-de-rehabilitacion-de-vivienda-y-regeneracion-urbana

Opportunities for social and affordable housing renovation

When utilizing Cohesion funding for FIs in the context of social housing renovations, several advantages and drawbacks emerge:

Advantages:

- FIs enable the efficient allocation of public funds while drawing in private investment.
- FIs offer sustainability by allowing funds to be reused, encouraging the financial sector to invest in key areas.
- FIs can lead to higher project quality due to the repayment requirement and necessitate careful project selection for commercial viability.
- FIs can bridge financial gaps, speeding up project initiation by providing comprehensive rather than partial funding.

Drawbacks:

- Setting up FIs can be time-consuming.
- There might be less leverage and higher costs than anticipated.
- Public entities may lack expertise in commercial practices required for FIs.
- Cohesion fund regulations regarding FIs can be complex.
- Monitoring and reporting for FIs can be burdensome and expensive.[22]

The EC has fostered the setup of FIs within Cohesion Funds, encouraging Member States to utilize allocated grants for sustainable urban development projects. In partnership with the European Investment Bank (EIB) and the Council of European Development Bank (CEB), guidance is provided to Member States on establishing repayable investments, which can take the form of equity, loans, and/or guarantees. This guidance, such as those under the JESSICA initiative, allow for the combination of grants and loans to leverage further investment, particularly in the domain of social housing where such funds are directed at improving housing stock and energy efficiency within urban development plans.[23]

The JESSICA initiative, operational from 2007 to 2014, demonstrated the effectiveness of using Urban Development Funds (UDFs) to channel investments into urban renewal projects, including social housing developments. The returns from these investments are then recycled into new projects, ensuring a sustainable financial model.

[22] Inspired in part on Peter Schneidewing i all, Financial engineering instruments in Cohesion Policy. Direction General of Regional Policy 2013 and F.Wishlade, R.Michie, Financial Instruments in 2014-2020: Learning from 2007-13 and adapting to the new environment 2014.

[23] European Investment Bank, "JESSICA. A new way of using EU funding to promote sustainable investments and growth in urban areas." 2008. Retrieved from: https://www.eib.org/attachments/thematic/jessica_2008_en.pdf.

Building on JESSICA's success, the New European Bauhaus territorial development model (NEB TDM) established in 2022, continues this approach. It supports managing authorities in implementing specific FIs for urban development and, importantly, projects aligned with the New Bauhaus principles of sustainability, aesthetics, and inclusivity, which include the renovation and construction of affordable and energy-efficient social housing.[24]

A variety of entities are eligible for Cohesion Policy funding, including public bodies, SMEs, universities, associations, NGOs, and even foreign firms with regional operations, provided they comply with EU procurement regulations.[25]

For social and affordable housing renovations, social housing providers may directly seek funding or utilize grants underpinned by cohesion funding, notably for energy-related renovations. Conversely, private residential owners typically access cohesion funding via public authority grants and, where available, FIs designed to support such investments.

Box 3 presents the Brussels Green Loan Scheme, an innovative approach funded by the Regional Energy Fund under the CF.

Box 3: Brussels Green Loan Scheme[26]

Initiated in 2008 by Brussels' Ministry of Energy and Environment, the 'Social Green Loan' programme was implemented in collaboration with CREDAL, a credit co-operative, offering zero-interest loans to low-income individuals. In 2012, the programme was rebranded as the Brussels Green Loan and was supported by the Energy House, a dedicated entity providing guidance and support to loan applicants. The initiative benefits from a €200,000 annual contribution from the Regional Energy Fund to offset interest rates, plus a regional budget allocation of €124,000 for operational costs. It has successfully granted over 520 loans, summing up to more than €4.5 million.

Box 4 details the use of European Structural Funds in Estonia through the KredEx fund to finance energy renovations in multi-apartment buildings.

Box 4: Estonian Business and Innovation Agency (KredEx fund)

[24] European Commission, "New Bauhaus territorial development model (NEB TDM) financial instrument", 17/06/2022. Retrieved from: https://ec.europa.eu/regional_policy/sources/communication/bauhaus/neb-financial-instrument-2022.pdf.

[25] Retrieved from https://ec.europa.eu/regional_policy/funding/accessing-funds_en.

[26] https://www.interregeurope.eu/sites/default/files/inline/TO4_PolicyBrief_Financial_Instruments.pdf

Recognizing that a significant portion of Estonia's housing stock dates back to a period with low energy efficiency standards, the KredEx Revolving Fund was established in 2009. With the support of European Regional Development Fund (ERDF), it provides reconstruction grants of 15%, 25%, or 40%, along with preferential loans from local banks to homeowners. As a result, by the end of 2014, KredEx had facilitated the energy renovation of 615 apartment buildings, marking significant progress in the country's housing sector.

How to apply

The Cohesion Policy Sectoral FIs operate under a shared management framework in which the European Commission collaborates with Member States and implementing partners (like the EIB) to determine resource allocation. Managing Authorities bear the responsibility of choosing to utilize Cohesion Policy funds for the implementation of financial instruments, once their potential has been identified. The design of these FIs and the selection of appropriate financial products should be finalized during the early stages of implementation.

Financial instruments are suitable for those financially viable projects that are expected to generate enough income or savings to payback the support received. They are designed to address identified market failures, where traditional banks are reluctant to lend or the private sector is hesitant to invest.

The fi-compass serves as a dedicated online resource for anyone interested in EU shared management financial instruments. It provides advisory services to Managing Authorities, offered by the European Commission in partnership with the European Investment Bank (EIB). Within this portal, specific data concerning the initiatives of each Member State can be found.

3.3.2. European Energy Efficiency Fund (EEEF)

General description

The European Energy Efficiency Fund (EEEF) is dedicated to advancing the climate objectives outlined by the European Union (EU) within the 2030 framework for climate and energy and the climate-neutral goals of the European Green Deal. Its mission is to promote a sustainable energy environment and bolster climate protection by supporting projects in European cities, regions, and communities. The EEEF strives to enable the development of resilient infrastructure and climate-related investments that enhance the sustainable energy market. It achieves this by combining both private and public capital.

Investments in Energy Saving and Energy Efficiency encompass a wide range of areas, including:

- **Public and private buildings** incorporating renewable energy and energy efficiency solutions, including those leveraging Information and Communication Technologies (ICT).
- Investments in **highly energy-efficient combined heat and power** (CHP), including micro-cogeneration, and district heating/cooling networks, with a focus on renewable energy sources.
- **Local infrastructure enhancements**, such as efficient outdoor public lighting, electricity storage solutions, smart metering, and smart grids that maximize the use of ICT.
- Adoption of **energy efficiency and renewable energy technologies** with innovation and economic potential, using best available practices.

Investments in **Renewable Energy sources** cover:

- Distributed generation from **local renewable energy** sources for medium and low voltage (110kV and lower) distribution networks.
- **Smart grids** that enable greater integration of renewable energy sources.
- **Energy storage** solutions to store energy generated from intermittent sources during low-consumption hours for later use during peak demand.
- Injection of locally produced **biogas** into the natural gas network.
- **Microgeneration** of energy from renewable sources, promoting distributed energy production.

The primary beneficiaries of the EEEF are **municipal, local, and regional authorities** of EU Member States. Additionally, public and private entities acting on behalf of these authorities, such as utilities, public transportation providers, social housing associations, and energy service companies, can also benefit from the fund. Consequently, there must be a direct or indirect municipal connection within the project. This can be established either through direct municipal involvement (e.g., as a building owner or investor) or through long-term contracts between the municipality and a third party (e.g., a public transport concession or an Energy Performance Contract (EPC) for a public building).

Opportunities for social and affordable housing renovation

The EEEF actively contributes to energy efficiency and renewable energy efforts by offering dedicated financing through direct finance and partnerships with financial institutions. This is particularly beneficial for public sector investors, who often face budget constraints, and local authorities with limited experience in such investments. To qualify for support, projects must demonstrate the capacity to achieve a minimum of 30% primary energy savings or greenhouse gas emissions reductions compared to a baseline.

The EEEF provides direct investments to energy efficiency and renewable energy projects ranging from €5 million to €25 million. These investments may take the form of debt, equity, or guarantees, with debt instruments offering maturities of up to 13 years, and equity tailored to the various phases of a project.

Public authorities seeking financing for eligible projects should have clear climate change mitigation objectives in place, such as increasing energy efficiency or utilizing energy from renewable sources, often through initiatives like the Covenant of Mayors. Generally, an EEEF investment is not feasible if the project receives subsidies from other EU programmes (e.g., Structural Funds, Cohesion Funds).

How to apply

The EEEF primarily supports energy efficiency, renewable energy, and clean urban transport initiatives within the EU. It's aimed at municipal, local, and regional authorities, as well as public and private entities on their behalf. To determine project eligibility for EEEF financing, applicants should submit a request to the Investment Management Team via info@eeef.eu.

The Investment Manager of EEEF will serve as the initial point of contact for project inquiries and submissions. The Investment Manager of EEEF conducts initial project screening and, upon a positive outcome, proceeds with a detailed due diligence assessment. If project details are available (e.g., a project teaser, comprehensive project description/investment memo, financial model, technical and environmental information), sharing this information would be beneficial in the application process. Information about project that have been finance through the EEEF can be found in the quarterly reports.

3.3.3. InvestEU

General description

The InvestEU Programme is the European Union's ambitious initiative, succeeding the Investment Plan for Europe, with the aim to stimulate investment and support EU policy goals between 2021-2027 with an ambitious goal to mobilize over €372 billion in investments. This is underpinned by a €26.2 billion EU budget guarantee. It consolidates various funding streams into a single programme, using a significant EU budget guarantee to trigger expansive investment. The Programme is structured around the InvestEU Fund, Advisory Hub, and Portal, designed to streamline the investment process across the EU.

The InvestEU Fund, pivotal for EU's investment strategy, operates with 13 implementing partners, with the EIB Group being the primary executor, managing 75% of both the InvestEU Fund and the Advisory Hub's budget. Alongside the **EIB and EIF**, other key partners include International Financial Institutions (IFIs) and national banks like the CEB, which utilize 25% of the guarantee for investment support, advisory services, and technical assistance. This collaborative effort ensures a broad reach and diverse expertise in driving investment across Europe, with a strong emphasis on providing comprehensive support to project developers.

The InvestEU Fund empowers implementing partners to extend financing options such as debt, equity, and guarantees, adhering strictly to the European Commission's Investment guidelines. This Fund catalyses both private and public sector investments through its structured policy windows, each addressing distinct market gaps:

- **Sustainable Infrastructure Window**: Prioritizes environmentally sustainable infrastructure, including energy-efficient housing projects.
- **Research, Innovation, and Digitization Policy Window**: Fosters advancements in research and digital technologies.
- **SME Policy Window**: Supports small and medium-sized enterprises.
- **Social Investment and Skills Policy Window**: Focuses on social impact and skill-building, critical for social housing renovations.

For social and affordable housing renovation projects, the InvestEU Fund's Sustainable Infrastructure Window and the Social Investment and Skills Policy Window are especially pertinent, each offering distinct opportunities aligned with these projects' objectives. When projects align with multiple policy windows, the dominant objective dictates the appropriate window classification.[27]

Opportunities for social and affordable housing renovation

[27] REGULATION (EU) 2021/523 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 March 2021 establishing the InvestEU Programme and amending Regulation (EU) 2015/1017

1. Sustainable Infrastructure Window

The Sustainable Infrastructure Window allocates €9.9 billion of EU guarantees, targeting a minimum of 60% towards enhancing the EU's climate and environmental directives. This funding supports a broad spectrum of energy initiatives, such as renewable sources, energy efficiency upgrades, and comprehensive building renovations that aim to elevate energy savings. This focus is centred as well on integrating buildings with smart, interconnected energy systems, which include energy production, storage solutions, and digital transport networks, thereby reinforcing the energy infrastructure's interconnectedness.

To qualify for the Sustainable Infrastructure Window, projects must target energy efficiency improvements in existing buildings, with the goal of elevating their energy performance in compliance with the standards set by the Energy Performance of Buildings Directive. This window facilitates investment in both the enhancement of energy consumption efficiency and the integration of renewable energy solutions. It caters to the needs of both private and public social housing owners, enabling them to invest in infrastructure upgrades and associated equipment that contribute to a greener energy profile. [28]

2. Social investment and skills policy window

With a substantial budget of €2.8 billion guaranteed by the EU, this policy window is designed to support projects with a strong social impact or focus on skills development. It is a pivotal source for funding a broad range of socially driven initiatives, including those aimed at improving social and affordable housing.

Eligible projects under this window include, but are not limited to:

- Social enterprises and the wider social economy.
- Development and refurbishment of social infrastructure, which notably encompasses social and student housing.
- Initiatives promoting inclusion and improving accessibility.
- Programme dedicated to the integration of vulnerable populations, such as migrants and refugees.

This funding is particularly relevant for social housing renovations, offering a financial line to projects focused on enhancing living conditions and ensuring that housing is inclusive and accessible to all. Special conditions have been established within this window in relation with social infrastructure including affordable social housing. [29]

[28] European Commission, Delegated Regulation (EU) 2021/1078, 14/04/2021. Retrieved from: https://eur-lex.europa.eu/legal-

[29] European Commission, Delegated Regulation (EU) 2021/1078, 14/04/2021. Retrieved from: https://eur-lex.europa.eu/legal-

The InvestEU Programme defines affordable social housing as housing intended for individuals or groups who are disadvantaged or less socially advantaged. These individuals often live in significant housing deprivation or are unable to secure housing on the open market due to financial or social limitations. To address the low levels of investment that this sector faces, particular focus has been put on delivering housing solutions that pursue the objective of removing people from social exclusion. The programme prioritizes transformative housing solutions that contribute to societal inclusion. Eligible projects under this category include:

- Development of new, inclusive, and accessible social rental housing via construction, renovation, or acquisition from the private market.
- Establishment of social rental agencies to manage housing provisions.
- Delivery of integrated housing services that combine rental units with supportive on-site services.
- Modification of existing social housing to accommodate persons with disabilities.
- Assistance for marginalized communities to improve their living conditions.[30]

Entities such as individuals in vulnerable situations, social housing corporations, and housing cooperatives are eligible to benefit from this initiative.[31]

Box 5 provides insights into a project located in Hannover, Germany, where the EIB has utilized the InvestEU Fund through its social investment policy window to support the development of social and affordable housing.

Box 5: Unsecured loan from the EIB for the construction of affordable and social housing in Hannover

Within the framework of the InvestEU Fund's social investment policy window, the European Investment Bank (EIB), acting as one of the implementing partners, has extended an unsecured loan totalling €156 million to support a project in Hannover, Germany. This project aims to construct 640 new social and affordable housing units for rental purposes. The undertaking is poised to make significant contributions to sustainable urban development by providing top-quality, energy-efficient housing, complete with climate mitigation measures.

These newly constructed housing units are anticipated to exhibit energy performance levels surpassing German national standards by at least 20%, effectively qualifying

[30] European Commission, Delegated Regulation (EU) 2021/1078, 14/04/2021. Retrieved from: https://eur-lex.europa.eu/legal-

[31] European Commission, Delegated Regulation (EU) 2021/1078, 14/04/2021. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.234.01.0018.01.ENG&toc=OJ%3AL%3A2021%3A234%3ATOC

them as Net Zero Energy Buildings. Additionally, an admirable 12% of these units will be designed to be wheelchair accessible, further promoting inclusivity and accessibility.

The financing provided by the EIB offers several noteworthy benefits, including an extended loan maturity and favourable interest rate arrangements. These financial provisions have played a pivotal role in ensuring the project's optimal alignment with its implementation modalities, ultimately enhancing its affordability and overall success.[32]

How to apply

The InvestEU Fund has been operational since 2022 and, to facilitate its implementation, guarantee agreements have been executed with implementing partners. These partners provide direct and intermediated financing solutions to both private and public project promoters, commonly referred to as "final recipients."

Eligible final recipients for funding can be individuals or entities established in an EU country, including private entities (such as large corporates, midcap companies, SMEs), public sector entities, mixed entities (public-private partnerships), and non-profit organizations:

To access financing under the InvestEU Fund, project promoters should apply directly to implementing partners to inquire about suitable financing solutions based on the financial products supported by the EU guarantee. For Small and mid-cap enterprises (SMEs), along with social or micro-enterprises, are advised to apply to their local commercial or public banks whose financial products are supported by the EU guarantee in their respective country or region. The local intermediary will provide information on whether a specific financing programme falls under the InvestEU Fund. To locate the local intermediary, refer to the interactive map on the "Access to EU Finance website", which currently lists intermediaries under existing EU programmes and will subsequently include InvestEU financial intermediaries

[32] EIB, InvestEU score board. Retrieved from: https://investeu.europa.eu/system/files/2022-08/INVEU-ICR-0028-2022%20-%20SISW%20IC5%20-%20HANNOVER%20SOCIAL%20AND%20AFFORDABLE%20HOUSING_scoreboard_published.pdf

3.3.4. EIB Group

General description

The EIB Group, comprising the European Investment Bank (EIB) and the European Investment Fund (EIF), plays a critical role in EU financing. The EIB focuses on long-term finance aligned with EU policies, particularly Cohesion Policy, while the EIF specializes in supporting SMEs with risk finance. As the EIF's principal shareholder, the EIB significantly influences its operations.[33]

The group not only utilizes its capital for project finance but also manages substantial EU budget funds like InvestEU. Expertise in financing makes the group a vital advisor for utilizing EU funds and direct project promoters.

Projects conforming to EU policies are generally eligible for EIB funding,[34] which covers various aspects of social and affordable housing. This includes rental housing, accommodations for refugees, students, and apprentices, care homes, and innovative housing models addressing market failures, between others.[35]

On the Energy Transition field, adhering to the EU taxonomy,[36] the EIB supports energy renovations and related infrastructures contributing to climate mitigation, meeting the EU Taxonomy[37] Delegated Act's technical criteria. Therefore, the following building energy renovations and related infrastructures that contribute substantially to climate change mitigation are eligible:[38]

- Renovation of existing buildings fulfilling the technical screening criteria[39] of the EU Taxonomy Delegated Act (Commission Delegated Regulation (EU) 2021/2139).

[33] https://www.eif.org/who_we_are/shareholder/index.htm

[34] EIB eligibility, excluded activities and excluded sectors list.

[35]EIB, Social and Affordable housing with the EIB advanced finance for a basic need, 9/2019

[36] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

[37] The EU taxonomy is a cornerstone of the EU's sustainable finance framework and an important market transparency tool. It helps direct investments to the economic activities most needed for the transition, in line with the European Green Deal objectives. The taxonomy is a classification system that defines criteria for economic activities that are aligned with a net zero trajectory by 2050 and the broader environmental goals other than climate.

[38] European Investment Bank, Climate Action and Environmental Sustainability: List of eligible sectors and eligibility criteria, Latest revision 23 May 2022

[39] Building renovations are in line with the taxonomy, when they comply with the applicable requirements for major renovations, as established by the Directive of energy performance of buildings.

- In existing buildings installation, maintenance, and repair of energy efficiency equipment, charging stations for electric vehicles, instruments, and devices for measuring, regulating and controlling energy performance of buildings and renewable energy technologies fulfilling the technical screening criteria of the EU Taxonomy Delegated Act (Commission Delegated Regulation (EU) 2021/2139).
- District heating/cooling networks, cogeneration of heating/cooling and electricity, and storage of energy should also be in line with the taxonomy.
- Climate change adaptation that integrates measures to reduce material physical climate risks, in line with the EU Taxonomy Delegated Act and the Multilateral Development Banks (MDB) joint methodology for tracking climate change adaptation finance[40].

Project promoters are required to ensure that their building renovation efforts meet national energy performance standards, as stipulated by the Energy Performance of Buildings Directive. Urban regeneration projects, especially those enhancing social and affordable housing within holistic urban development plans, can secure EIB funding with terms matching the project's economic life, potentially surpassing 30 years.

The EIB actively engages in partnerships and alliances, leveraging its status as both a bank and an EU institution to enhance its operations. Through these collaborations, the EIB has achieved several key objectives:

1. Combining Loans with EU Budgetary Funds: The EIB has established various partnerships with different groups, enabling it to seamlessly integrate its loans with EU budgetary funds through joint initiatives. This strategic approach enhances the bank's ability to support a wide range of projects efficiently.
2. Catalyzing Banking Resources: These partnerships also position the EIB as a catalyst for other banks and financial institutions, encouraging them to channel their resources towards EIB-funded projects. This mobilization of additional funding resources amplifies the impact of EIB investments.

One noteworthy example of such an alliance involves the EIB collaborating with the Council of Europe Development Bank (CEB), the Union Sociale pour l'Habitat, and the Banque des Territoires. This alliance focuses on facilitating social housing associations' access to European funding for long-term investments in public social infrastructure. As part of this partnership, an impressive €650 million from both the EIB and CEB has been made available to support social housing associations through the Banque des Territoires. These funds supplement the

Alternatively, when these renovations lead to a reduction of primary energy demand (PED) of at least 30 %.

[40] Multilateral development banks are working together to better track climate adaptation finance and to improve their financing approach. As part of that, they have developed new methodologies for determining the types of activities that can contribute to climate adaption.

regulated loans provided by the Banque des Territoires, further strengthening the financing options available for social housing projects.

Additionally, the EIB collaborates with financial intermediaries at local level particularly those offering products tailored for small and medium-sized projects. This approach allows the EIB to tap into their local knowledge and expertise while maintaining proximity to the projects it supports. By working closely with these intermediaries, the EIB can better serve the specific needs of local communities and businesses.

Overall, the EIB's strategic partnerships and alliances play a pivotal role in enhancing its operational effectiveness and extending its reach to support a diverse range of projects and initiatives.

Opportunities for social and affordable housing renovation

For social housing associations seeking to navigate the EIB Group's financing options, it's essential to understand the alignment of their project with EU policy objectives. The EIB Group offers tailored financial products that cater to the specific needs of social and affordable housing projects, including loan products, equity finance, guarantees, and advisory services.

This diversified financial support enables the EIB to address the full spectrum of funding requirements for social and affordable housing renovations, encompassing a wide range of project scales. The EIB's offerings are designed to cater to various project magnitudes, from substantial urban redevelopment initiatives to the refurbishment of individual homes.

1. **Loan products:**

EIB typically covers up to 50% of a project's total cost with loans starting at €25 million and even lower amounts in some cases. However, for energy efficiency investments, it can go up to 75% of the capital cost[41].

- **Individual loans for the public sector** (starting at €25 million) to finance a single large investment project or investment programmes.
- **Individual loans for private sector entities** (typically start at €25 million and in certain cases, the EIB will consider lower amounts) to finance projects or investment programmes.
- **Framework loans for the public sector**: Flexible loans to finance an investment programme consisting of smaller projects.

[41] EIB energy lending policy: Supporting the energy transformation, 11/2019

- **Intermediate loans:** Loans to financial institutions that subsequently "on-lend" to final beneficiaries. For SMEs and mid-caps or for other priorities, such as financing small Energy Efficient and Renewable Energy projects.

Box 6 shows an example of a **framework loan** provided to local authorities in Bucharest to finance district-level energy renovations of residential buildings.

Box 6: EIB financing of the district-level energy renovations of residential buildings in Bucharest

The project focus on thermal energy efficiency improvements of the building envelope of multi-apartment residential buildings (wall, roofs, and cellar insulation), window replacement, improvements in the heating and domestic hot water systems and replacement of indoor lighting located in common spaces. Mostly low-income households live in these buildings. It has been developed in several phases, from 2012 to 2022. The Bucharest districts (so-called sectors) concerned are the following: sectors 1[42], 2[43], 4[44], 5[45], and 6[46]. The total amount of finance granted by the EIB amount to €253 million.

The EIB financing is a programme loan to finance multiple investments of multiple local authorities that will undertake the building renovations. The projects are part of the National/Regional Energy Efficiency Action Plans, or the national/regional Energy Efficiency schemes developed in Romania.

Box 7 shows an example of **intermediate loan** used to finance building energy renovations in Spain and Portugal (MBIL).

Box 7: Union de Créditos Inmobiliarios SA (UCI) BUILDING RENOVATION MBIL[47]

The EIB is supporting the UCI with an intermediated loan (MBIL) to finance building energy renovations undertaken by individuals and homeowner associations in Spain and Portugal. The EIB financing was signed in 2021, and the approximate amount was €50 million.

[42] https://www.eib.org/en/projects/all/20120498

[43] https://www.eib.org/en/projects/pipelines/all/20160951

[44] https://www.eib.org/en/projects/all/20160766

[45] https://www.eib.org/en/projects/all/20160768

[46] https://www.eib.org/en/projects/all/20160952

[47] https://www.eib.org/en/projects/pipelines/all/20210137

UCI acts as an intermediary financial institution and is one of the most active players in green financing in the Spanish market. The project aims to improve energy performance of buildings by providing access to finance for homeowner associations and individuals, thereby promoting investment in energy efficiency. Its primary focus is on financing deep renovations led by homeowner associations in Spain and, to a lesser extent, in Portugal.

By financing the segment of building energy renovation, the EIB will reduce funding expenses and encourage additional investors to participate. This will increase interest in financing home energy renovation projects carried out by homeowner associations.

2. **Equity finance:**

The EIB, as a long-term lending institution, provides finance for economically viable projects that are aligned with its policy goals, primarily investing or co-investing along with certain funds. In some cases, the EIB also provides direct quasi-equity financing to support innovative companies in seek of financing to grow.

An example of an EIB equity investment related to the district heating/cooling network in the Netherlands is shown in Box 8.

Box 8: EIB equity investment

Equity and risk capital for district heating/cooling networks is in very limited supply, considering the high risk involved in particular in the initial phase of developing such networks. To tackle this problem the EIB has funded an equity investment vehicle that will build a diversified portfolio of district heating networks in various Dutch municipalities. EIB has signed €30 million agreement with Asper Investment Management for its Dorothea investment vehicle, which will acquire and build at least four district heating projects in the Netherlands.[48] Dorothea will support new and existing district heating projects in various municipalities, starting with the heating network of Ede. The financing is supported under the European Fund for Strategic Investments, the main component of the European Commission's Investment Plan for Europe.

3. **Guarantees:**

The EIB guarantees to unlock additional financing for small- and medium-sized enterprises or mid-caps or other entities by covering a portion of possible losses from a portfolio of loans

[48] https://www.eib.org/en/press/all/2020-269-eu-support-for-dutch-district-heating-projects

and improving the financial conditions. A guarantee, in this context, means that the EIB agrees to cover a portion of potential losses that may arise from a portfolio of loans.

Also, EIB provides subordinated financing, funded or unfunded guarantees, and contingent credit lines designed to enhance the credit quality/credit rating of the senior debt. By offering these guarantees, the EIB helps reduce the risk for lenders, making it more attractive for them to provide financing to borrowers and improve financial conditions for borrowers.

Box 9 shows an example of a guarantee mechanism set up in Lithuania for building renovation.

Box 9: Guarantees for building renovation: EIB and Šiaulių Bankas continue financing of loans for energy efficiency increase in multi-apartment houses in Lithuania[49]

In 2019, the EIB and Siauliu Bankas signed a new guarantee agreement to continue and renew their financing for the energy efficiency renovation of Lithuanian multi-apartment buildings. The EIB provided a €30 million guarantee from the European Regional Development Fund (ERDF) for a portfolio of €150 million in loans granted by Siauliu Bankas to homeowners for the modernization of their properties. This public-private partnership has made it possible to maximize the use of EU funds for the renovation programmes.

The financing situation in Lithuania has shifted from using financial intermediaries as agents to disburse ERDF and national funds, to an ERDF-backed guarantee to banks, which are using their own funds to provide Modernization Loans. This last step has greatly improved the leverage of this financing, maximizing the number of households that can receive cheaper loans. The loan term is 20 years.

4. **Advisory services:**

The EIB advisory service embraces all stages of the project cycle and beyond. The InvestEU Advisory Hub is the first point of contact for information on EIB advisory services within the EU.

How to apply

To access the different types of financing offered by the EIB Group, an applicant can create an account through this contact link and submit any questions. The same page explains how to create an account and has a section on frequently asked questions.

49 https://www.eib.org/en/press/all/2019-001-new-financing-for-energy-efficiency-loans-in-lithuania-with-siauliu-bankas

The EIB cooperates with a wide range of financial intermediaries offering products for small and medium-sized projects. The EIB group benefits from the knowledge of its local partners and their proximity to the projects themselves. An SME or mid-cap company looking for financing can contact the intermediaries in the corresponding country directly and consult the financial products they offer. On the "Partners for private and public sectors" website, the contact details of these banks by country are available.

3.4. Grants schemes

3.4.1. Recovery and Resilience Facility (RRF) grants

General description

The Recovery and Resilience Facility (RRF) is a key pillar of NEXTGenerationEU, designed to bolster economic recovery post-COVID-19 and to support the REPowerEU Plan in response to the energy impact of the Russian invasion of Ukraine. This transitional funding instrument, operational until the end of 2026, aims to enhance the sustainability and digitalization of Member States economies and address country-specific challenges. Boasting a budget of €723 billion, of which €385.8 billion are in loans and €338 billion are in grants, the RRF is a significant financial tool.

The RRF finance Member States' reforms and investments from the start of the pandemic in February 2020 until the end of December of 2026. Funds must be used by Member States to implement ambitious reforms and investments to make their economies and societies more sustainable, resilient and prepared for the green and digital transition. Member States must submit their recovery and resilience plans to the EC, setting up their planned reforms and investments, to receive the grants up to the agreed allocation with the EC. In the following scoreboard the investment plans of each country can be seen.

Opportunities for social and affordable housing renovation

RRF funds can be used for all types of projects that contribute to one of the following pillars:

1. Green transition – at least 37% of the budget allocated to this topic.
2. Digital transformation – at least 20% of the budget allocated to this topic.
3. Smart, sustainable, and inclusive growth
4. Social and territorial cohesion
5. Health and economic, social and institutional resilience
6. Policies for the next generation

For social housing, the RRF offers a chance to significantly improve energy efficiency standards. Approximately 7% of the RRF funds have been invested in social housing initiatives so far, demonstrating a commitment to this sector.[50]

From the recovery and resilience plans approved by the EC a significant amount of funds has been allocated to energy efficiency and decarbonisation of buildings. Around €65.3 billion (corresponding to 13.4% of total expenditures of the plans) have been allocated to energy efficiency of the building stock. Mainly Belgium, France and Spain have included in their

[50] Retrieved from: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/social.html

recovery and resilience plans specific investments on energy efficiency renovations or constructions of social housing.[51]

How to apply

RRF funds are directly managed by the EC. The RRF is a performance-based facility which means that funds are released only after set milestones are achieved. Access to RRF grants is exclusive to EU governments, which must present national resilience and recovery plans encompassing proposed projects[52]. Governments have the flexibility to revise and resubmit their plans to ensure they align with evolving goals. The Recovery and Resilience Facility regulation outlines the conditions for receiving loans, the application process, and how funds can be used.

In the following link it can be seen how countries are implementing the RRF funds. For a comprehensive review of how recovery plans impact social housing, Housing Europe has produced a report on where the funds will be allocated[53].

[51] Retrieved from: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/assets/thematic_analysis/scoreboard_thematic_analysis_efficiency.pdf

[52] Information about all countries that have submitted the plan can be found here: https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

[53] The report is accessible here: https://www.housingeurope.eu/resource-1635/impact-of-the-recovery-plans-on-the-social-and-affordable-housing-sector

3.4.2. Cohesion Policy funds

General description

The different funds differ in their geographical scope, with some available EU-wide and others targeted at specific regions, especially less developed ones that receive more substantial funding. It's worth noting that member states co-finance these programmes, augmenting the total funding beyond the EU's initial contribution. The EU funds allocated to Cohesion Policy amount €392 billion and it is expected that, with the co-financing from the Member States, these programmes will have around half trillion euro available to finance different projects.

The funds earmarked for Cohesion Policy in the 2021-2027 period, are allocated across five specific policy objectives (POs):

- PO1: Encourages a smarter Europe, fostering innovation, digitalization, economic transformation, and SME support.
- PO2: Aims for a greener, carbon-free Europe.
- PO3: Focuses on connecting Europe through enhanced transport and digital networks.
- PO4: Strives for a more social Europe, upholding the European Pillar of Social Rights, and improving employment, education, skills, social inclusion, and healthcare equality.
- PO5: Works towards bringing Europe closer to its citizens by promoting local initiatives and sustainable urban development.

When developing financial plans for social and affordable housing renovations using Cohesion Policy funds, it's vital to align the project's goals with the funding objectives to fully leverage available resources. Aligning renovation projects with these POs, particularly PO2, PO4 for social inclusivity and PO5 for sustainable urban development, can increase the chances of securing funding for housing projects.

The Cohesion Policy funds are structured into various funds, each with distinct priorities that align with the POs of the EU:

- The **European Regional Development Fund (ERDF)** focuses on all five policy objectives, with a strong emphasis on fostering a smarter (PO1) and greener Europe (PO2).
- The **European Social Fund Plus (ESF+)** is primarily dedicated to advancing a more social Europe (PO4).
- The **Cohesion Fund (CF)** supports efforts towards a greener (PO2) and more connected Europe (PO3).
- The **Just Transition Fund (JTF)** is aligned chiefly with PO2 under its specific regulatory objectives, aiding regions in the transition towards a green economy. This fund is being managed under the Just Transition Mechanism further explained in the section 3.2.2 of this document.

- **Interreg programmes** enhance regional cooperation and development, with the additional goals of improving governance and security within Europe.
- The **European Agricultural Fund for Rural Development (EAFRD)** contributes to rural development programmes, emphasizing sustainable resource management and climate action.

The available Cohesion Policy funds can be allocated as direct grants or channelled into the creation of **financial instruments (FIs).** These FIs are explained in detail on section 3.3 about financing alternatives to attract private investments. Given the substantial funds allocated for the 2021-2027 period and the heightened focus on combating climate change, the allocation for building renovation, especially for energy efficiency improvements, has seen a notable increase from the previous funding period.[54]

For social housing energy renovation projects, the European Regional Development Fund (ERDF) and the European Social Fund Plus (ESF+) are particularly relevant. The ERDF can support the technological and infrastructure improvements needed for energy efficiency, while the ESF+ can fund initiatives that contribute to social inclusion by improving living conditions. Additionally, the Cohesion Fund (CF) and the Just Transition Fund (JTF) may also be applicable for projects that involve developing sustainable energy systems in less developed regions.

Opportunities for social and affordable housing renovation

A. European Regional Development Fund

The European Regional Development Fund (ERDF) aims to address disparities between European regions by facilitating investments in more intelligent, eco-friendly, interconnected, and socially responsive countries that are closely aligned with the needs of their citizens. Under the 2021-2027 plan, the following funding priorities have been established:

1. Enhancing competitiveness and fostering innovation and digitalization in small and medium-sized businesses (PO 1).
2. Promoting a greener society with reduced carbon emissions and increased resilience (PO 2).
3. Improving connectivity and mobility (PO 3).

[54] According to Housing Europe (https://www.housingeurope.eu/resource-1633/housing-investment-through-cohesion-policy-2021-27) since 2007, Cohesion Policy is increasing its support for affordable housing, with €2 billion in 2007-2013 and €6.6 billion in 2014-2020, including new buildings and renovation of existing buildings.

A substantial amount of funds has been dedicated to energy renovations of buildings. In the period 2014-2020 Cohesion policy funds to improve the energy efficiency of residential buildings has amounted to €4.6 billion (From European Court of Auditors, Energy efficiency in buildings: greater focus on cost-effectiveness still needed. 2020).

4. Advancing social inclusion by supporting employment, education, skills development, social integration, and equal access to healthcare (PO 4).
5. Strengthening the connection between policies and the people they serve (PO 5).

Regarding the allocation of ERDF funds, each Member State is guided by its level of prosperity and is required to distribute their allocated funds as follows:

- 30% of the allocation must be directed towards PO 2.
- More developed regions within Member States must allocate a minimum of 85% of their funds to PO 1 and 2.
- Transition regions should dedicate at least 40% of their funds to PO 1.
- Less developed regions or Member States must allocate a minimum of 25% of their funds to PO 1.
- Urban development should receive a minimum allocation of 8% of the funds from all Member States.

The ERDF operates under a shared management structure, where the European Commission (EC) and Managing Authorities of the Member States jointly decide on the programs to receive funding. The Managing Authorities are responsible for selecting and managing specific projects on a day-to-day basis, but their fund allocation decisions must be agreed upon in advance with the EC.

Managing authorities are responsible for setting up the application procedures to apply for specific grants. Some of them have stablished ongoing procedures, while others accept application only on certain times. The specific conditions stablished by Member States' Managing Authorities can be checked on this link, where it is explained who can apply for the ERDF funds.

An example of a social housing retrofitting project financed with ERDF funds can be seen in Box 10.

Box 10: Revitalization of the Finosello ZAC in Ajaccio – Transforming 496 Residences

This ambitious undertaking embodies the rejuvenation of 496 social housing units, originally constructed in 1990 within the Finosello ZAC of Ajaccio. Notably, this initiative constitutes a significant proportion, accounting for 15% of Corsica's social housing inventory. A central objective of this project is the comprehensive revitalization of these residences, all while avoiding tenant displacement. The ultimate goal is to elevate the energy efficiency of each dwelling, achieving a remarkable enhancement of 2 to 3 energy labels per unit.

The project's financial requirement for this energy-efficient makeover amounted to €11 million, with a substantial portion of €3.27 million (29.66%) secured through

funding from the European Regional Development Fund (ERDF). Oversight and management of this program have been entrusted to the Collectivité Territoriale de Corse, serving as the responsible managing authority.

Embarking on this transformative journey commenced in August 2018, and the project was compled in June 2023. This endeavor stands as a testament to the commitment to sustainable urban development and housing improvement within the Finosello ZAC, poised to significantly elevate the living standards and energy efficiency of this vital housing stock in Corsica.

Interreg

Interreg is a vital European initiative dedicated to fostering collaboration among regions and countries. This program offers funding opportunities for projects spanning across Member States, their outermost regions, and neighboring countries. For the 2012-2027 period, Interreg has been allocated a budget of nearly €10 billion, specifically earmarked for initiatives aimed at promoting cross-border mobility and addressing critical areas such as environmental protection, emergency services, skilled job creation, and improved access to public services.

In addition to aligning with the overarching five policy objectives of the Cohesion Policy, Interreg funds are also geared towards achieving two distinct and crucial objectives:

1. Interreg Specific Objective 1 (ISO 1): This objective focuses on strengthening cooperation and governance by enhancing the institutional capacity of public administrations.
2. Interreg Specific Objective 2 (ISO 2): This objective contributes to building a safer and more secure Europe through the support of mobility and migration projects, as well as measures aimed at boosting employment and labor market opportunities.

It's worth noting that Interreg funds can be effectively utilized for social housing retrofitting projects, aligning with its broader mission to create a more sustainable and inclusive Europe. A prime example of this commitment can be seen in the Social Green project (shown in Box 11), which was successfully implemented across six EU countries. This initiative was designed to pave the way for greener and more socially inclusive social housing, exemplifying Interreg's dedication to driving positive change across Europe.

Box 11: Social Green – regional policies towards greening the social housing sector[55][56]

The Social Green initiative was executed within the framework of the Interreg Europe programme, specifically falling under the "Low-carbon economy" priority for the 2014-2020 period. This visionary project received a significant total investment of €998,532 and was primarily dedicated to enhancing regional policy tools aimed at reducing greenhouse gas emissions within the social housing sector while addressing the pressing issue of fuel poverty.

Throughout the project's duration, the consortium partners engaged in constructive dialogues with local stakeholders to identify and address the obstacles hindering the greening of social housing. These collaborative efforts culminated in the development of a comprehensive set of specific actions, best practices, and valuable insights that have contributed to a more sustainable and energy-efficient future for the social housing sector.

B. European Social Fund Plus

The European Social Fund Plus (ESF+) serves as the primary instrument within Europe for supporting the realization of the European Pillar of Social Rights, playing a pivotal role in advancing social and economic well-being across the continent. With a substantial budget of €99.3 billion allocated for the 2021-2027 period, it remains steadfast in its commitment to making significant contributions to Europe's employment, social, education, and skills policies.

At its core, the ESF+ is firmly rooted in the 20 principles outlined in the European Pillar of Social Rights. Among these principles is a fundamental commitment to ensuring that every European citizen, regardless of their income, enjoys access to essential necessities for a dignified life, including affordable, high-quality housing.

In its mission to uphold the principles of the Social Rights Pillar, the ESF+ directs its funding towards initiatives aimed at bolstering employment, education, and skills development. Through these endeavors, the ESF+ seeks to assist Member States in their journey to reduce

[55] https://ec.europa.eu/regional_policy/projects/projects-database/mutual-learning-for-greener-social-housing_en

56 https://www.eib.org/en/projects/pipelines/all/20210137

unemployment rates, foster equitable access to quality education, and enhance social inclusion and integration efforts.

Within the realm of social and affordable housing, one of the key objectives of the ESF+ is to support projects that promote social inclusion by facilitating the socio-economic integration of marginalized communities. This involves ensuring equal access to quality services, modernizing social protection systems, and facilitating the social integration of individuals facing various forms of vulnerability.

The ESF+ operates under a shared management framework, wherein Member States, in collaboration with the European Commission, oversee the allocation and management of available funds.

To illustrate the practical application of ESF+ funds in the realm of social housing, an example is provided in Box 12, which delves into the "Housing First Trieste project." This initiative serves as a tangible demonstration of how ESF+ resources are leveraged to address critical housing-related challenges and foster social inclusion.

Box 12: Housing First Trieste

The Housing First Initiative in Trieste offers a transformative approach to addressing homelessness by providing individuals with a clear pathway to secure housing coupled with comprehensive social support. This initiative is dedicated to offering a permanent residence to vulnerable individuals, with eligibility criteria that prioritize those experiencing homelessness or residing in unsafe or inadequate housing. Central to its philosophy is the "Housing First" methodology, which views housing as the initial step towards breaking the cycle of homelessness rather than an ultimate goal.

Launched in 2019 and successfully concluded in 2021, this project received a financial injection of €362,862 from the ESF+. It stands as a shining example of how innovative approaches and targeted funding can make a significant impact on the lives of those most in need, providing not just shelter, but the foundation for a brighter future.

C. Cohesion Fund

The Cohesion Fund (CF) plays a pivotal role in supporting strategic investments, particularly in the fields of environmental sustainability and the development of trans-European networks for transportation infrastructure (TEN-T). Its primary focus lies on Member States with a gross national income per capita that falls below 90% of the European Members' average. For the 2021-2027 period, the CF has been endowed with a substantial budget of €48.3 billion,

directed towards Bulgaria, Czechia, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia.

Operated under a shared management framework, the CF empowers Member States' managing authorities to collaborate with the EC in determining the allocation of funds. Member States bear the responsibility of selecting projects for financing, subject to prior approval by the EC. Notably, it has been mandated that a significant portion, 37% of the available CF funds, should be directed towards projects contributing to the attainment of climate-related objectives.

To illustrate the CF's potential impact on social and affordable housing, a case study is provided in Box 13, spotlighting the modernization of the Zawada housing estate in Elblag, Poland. This example showcases how CF funding can be harnessed to drive meaningful transformations within the realm of housing, aligning with broader goals of sustainability and inclusive development.

Box 13: Thermal modernization of the Zawada housing estate in Elblag

The ambitious thermal modernization initiative undertaken at the Zawada housing estate in Elblag represents a significant milestone in the revitalization of 22 multi-family residential buildings managed by the Zakrzewo Housing Association. This comprehensive project encompasses a wide range of activities, including preparatory groundwork, construction endeavors, project promotion efforts, and the subsequent execution of 22 post-project audits.

With a total budget of €9 million, this transformative undertaking received substantial support amounting to €6.85 million (75%) from the Cohesion Fund, underscoring its importance in promoting sustainability and energy efficiency. Launched in 2014, the project reached its successful completion in 2022, marking a remarkable achievement in the enhancement of living conditions and environmental performance within the Zawada housing estate.

How to apply

The majority of EU Cohesion Policy funds are administered by the Member States themselves, established through partnership agreements with the EC. These agreements set the framework for various investment programmes aimed at directing funds to designated regions and specific policy areas. These programmes are structured into distinct Operational Programmes (OPs), with each country deciding their tailored OPs.

Within the EU's framework for these funds, each Member State designates a management authority, commonly a part of national or regional government structures. The "management authority" for OPs under the Cohesion Policy funds plays a pivotal role in administering and overseeing the implementation of these funds within EU countries. This authority is responsible for managing and implementing the OPs, ensuring that the funds are used effectively and in accordance with EU and national regulations. They also handle the selection of projects, monitoring of implementation, and assessment of outcomes to ensure that the strategic goals of the Cohesion Policy are met.

Box 14 shows an example of a Management Authority in France with strong focus on affordable housing.

Box 14: the case of L'Union sociale pour l'habitat (USH) as management authority in France.

L'Union sociale pour l'habitat (USH) in France, involved in the consultation process for the French Partnership Agreement, has been managing the Cohesion Policy to support affordable housing since 2009, a commitment that has strengthened with additional funding from ReactEU and the Recovery and Resilience Facility (RRF). A significant portion of these funds have been allocated specifically for social housing through ERDF and ESF+ funding, covering energy renovations and support for sustainable urban development. Notable increase in funding for the 2021-2027 period due to additional allocations from ReactEU, amounting to €3.9 billion, and the Recovery and Resilience Facility (RRF), contributing €40 billion to the France Relance Plan, of which €550 million is specifically earmarked for social housing.[57]

Before seeking funding, it's essential to review the relevant OP for a given region to ensure that the proposed project aligns with both the selection criteria and the investment priorities of that regional programme. To qualify for funding, the project must match the OP's thematic objectives and its detailed specific objectives.

Accessing Cohesion Funds (CF) for building or district renovation projects requires adherence to the application processes set by the relevant managing authority. While some authorities offer continuous application opportunities, others may open their doors only during specific periods. A comprehensive understanding of these processes can be gained by consulting the EC's website dedicated to accessing funds[58].

[57] Retrieved from: https://www.housingeurope.eu/resource-1633/housing-investment-through-cohesion-policy-2021-27.

[58] https://ec.europa.eu/regional_policy/funding/accessing-funds_en

3.4.3. Horizon Europe

General description

Horizon Europe (HorizonEU) stands as the EU's paramount Research and Innovation programme, boasting a budget of €95.5 billion for grants. Its principal aim is to address climate change, align with the UN's Sustainable Development Goals, and enhance the EU's competitiveness and growth. The programme fosters collaborative efforts, emphasizes the influence of research and innovation in the formation, support, and execution of EU policies, and confronts global challenges. It's instrumental in disseminating exceptional knowledge and technology.[59]

As it can be seen in *Figure 5*, the HorizonEU programme is divided in the following three pillars: (i) excellent science with an allocated budget of €25 billion, (ii) global challenges and European industrial competitiveness with a total budget of €53.5 billion, and (iii) innovative Europe with a €13.6 billion budget. Apart from these pillars, a section to widening the participation and strengthening the European research area has been created with an allocated budget of €3.4 billion.

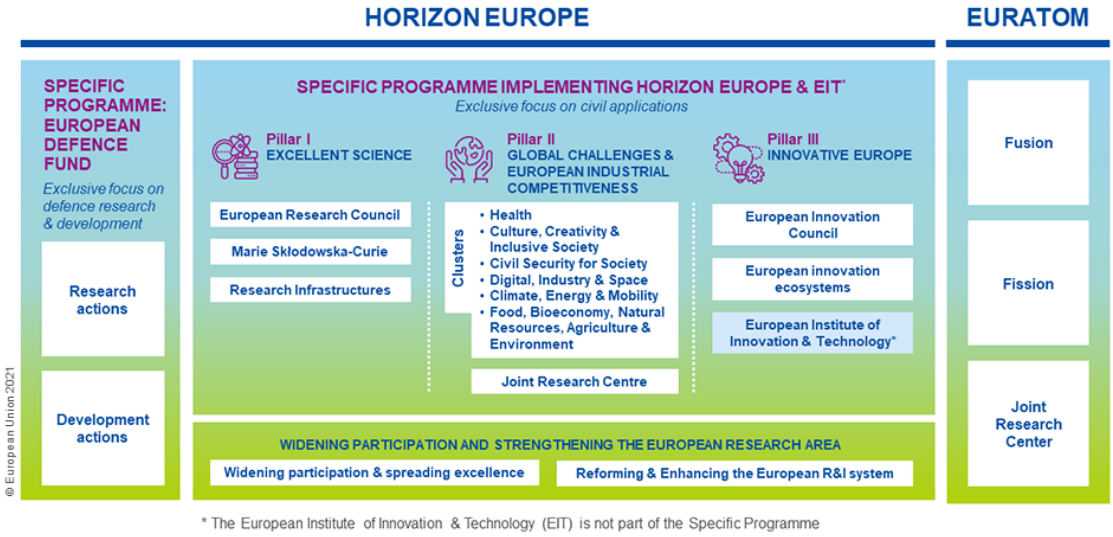


Figure 5 - The three pillars of Horizon Europe

Opportunities for social and affordable housing renovation

Funding opportunities for the HorizonEU programme have been divided in work programmes. In the case of the "global challenges and European industrial competitiveness" pillar, which is the most relevant for social and affordable housing initiatives - it has been divided in the following six clusters:

[59] https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

1. Health (€8.2 billion budget)
2. Culture, creativity, and inclusive society (€2.3 billion budget)
3. Civil security for society (€1.6 billion budget)
4. Digital, industry and space (€15.3 billion budget)
5. Climate, energy and mobility (€15.1 billion budget)
6. Food, bioeconomy, natural resources, agriculture and environment (€8.9 billion budget)

One of HorizonEU's main focus is to build a strong, inclusive, and democratic European society. Specifically, Cluster 5 under the HorizonEU Strategic Plan 2021-2024 targets the energy and mobility sectors' transition, prioritizing citizen and societal engagement. It emphasizes innovation in public participation within the low-carbon transition, aiming for a significant impact towards a climate-neutral, resilient society and economy. HorizonEU's overarching mission is to steer Europe towards a more environmentally conscious and resilient future. Social and affordable housing projects that contribute to the creation of a greener, more resilient society and economy are intrinsically aligned with the programme's fundamental objectives.

Calls for proposals under this programme may suit social and affordable housing renovation projects that align with these goals. In terms of funding and innovation, HorizonEU allocates financial resources to facilitate housing improvements, leading to the development of superior and more economically viable housing options. Furthermore, it promotes innovative approaches to enhance housing comfort and sustainability.

Box 15 shows the HIROSS4all project funded under the Horizon 2020 programme.

Box 15: HIROSS4all – Home Integrated Renovation One-Stop-Shop for vulnerable districts

HIROSS4all successfully developed and implemented the Opengela OSS, an innovative initiative offering Integrated Home Renovation Services in two vulnerable districts within the Basque Country, Spain. These tailored services were specifically crafted to address the unique needs of vulnerable populations residing in multi-family buildings. The project encompassed the creation of effective communication strategies and the provision of financing solutions to empower residents to retrofit their homes for enhanced energy efficiency.

This project secured a total funding of €1.7 million and delivered tangible results by completing energy renovations for more than 13 buildings located in these two neighbourhoods.

To maximize impact and encourage greater citizen engagement, the HorizonEU program for the 2021-2027 period has been subdivided into five specific missions under the "global challenges and European industrial competitiveness" pillar. These missions aim to provide

concrete solutions to the European Commission's priorities through innovative forms of governance and collaboration. Their primary objective is to support Europe's transformation into a greener, healthier, more inclusive, and resilient continent. The five EU Missions are:

1. Adaptation to climate change.
2. Beating cancer.
3. Restore the oceans.
4. Achieve climate-neutral and smart cities.
5. Establish 100 living labs and lighthouses to lead the transition towards a sustainable future.

The EU Missions aim to mobilize and activate both public and private stakeholders to create a meaningful and lasting impact. They seek to engage citizens in the design, implementation, and monitoring of new solutions.

Each mission functions as a portfolio of actions, including research projects, policy measures, or legislative initiatives, with the aim of achieving measurable goals.

From the perspective of implementing social and affordable housing renovation projects, the missions on climate change adaptation and the creation of 100 climate-neutral cities and smart cities by 2030 are particularly relevant.

The adaptation mission focuses on supporting EU regions, cities, and local authorities in building resilience against climate change. It helps these entities understand climate risks, develop preparedness strategies, and test innovative solutions on the ground. This mission aligns with the goals of the Green Deal and EC's Adaptation policies.

The climate-neutral cities and smart cities mission addresses the significant challenges European cities face in mitigating climate change. Given that cities house approximately 75% of EU citizens, consume over 65% of the world's energy, and contribute more than 70% of global CO2 emissions, this mission is crucial. It will support 100 cities in accelerating their green and digital transformations, serving as hubs for experimentation and innovation to guide other European cities toward carbon neutrality by 2050. This mission takes a cross-sectoral and demand-driven approach, aiming to create synergies between existing initiatives and meet the actual needs of citizens.

Actions under these missions will encompass various subjects, such as zero-emission mobility, creating clean energy districts, urban greening, and re-naturing. Additionally, these missions will involve Ukrainian cities in the climate-neutral and smart cities mission.

How to apply

HorizonEU funds various collaborative projects, typically involving at least three partners from different countries, and falls into four categories:

1. Research and innovation action (RIA) – advancing knowledge or exploring new technologies, products, processes, services, or solutions, with EU funding covering 100% of project costs.
2. Innovation action (IA) – developing plans or designs for new or improved products, processes, or services, including prototyping, demonstrating, piloting, large-scale product validation, and market replication, with EU funding covering 70% of project costs.
3. Coordination and support action (CSA) – enhancing cooperation among EU and associated countries to strengthen the research area, encompassing activities such as standardization, dissemination, awareness-raising, communication, and networking, with EU funding covering 100% of project costs.
4. Programme co-fund action (COFUND) – offering multi-annual co-funding for European partnerships that bring together public and private partners, with EU funding covering between 30% and 70% of project costs.

Prospective applicants must respond to specific calls for proposals available on the Funding & tender opportunities website. The application process involves:

- Identifying suitable funding opportunities and comprehending application conditions.
- Crafting a robust proposal that meets the call's objectives.
- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.
- If the proposal is approved, to agree on signing a Grant Agreement, or contract with the grant authority (an agency within the European Commission).
- To undertake the project according to the Grant Agreement terms and conditions.

Interested applicants can reach out the National Contact points of the HorizonEU (NCPs) that provide guidance, practical information and assistance on all aspects of participation of HorizonEU. In general, the NCPs provide the following services:

- Guidance choosing relevant HorizoEU topics and types of actions.
- Advice on administrative procedures and contractual issues.
- Training and assistance on proposal writing.
- Documentation.
- Assistance in partner search.

3.4.4. Innovation fund

General description

The Innovation Fund stands as one of the world's premier funding programmes dedicated to the deployment of cutting-edge, net-zero, and innovative technologies. Designed to facilitate transformative changes, this fund focuses on high-impact technologies and flagship projects that promise substantial reductions in greenhouse gas emissions. It offers grants and has introduced "Competitive Bidding" as a new financing mechanism since 2023. The Innovation Fund covers up to 60% of the relevant costs when it comes to grants and 100% of the cost in the case of competitive bidding.

The Innovation Fund extends its support to all EU Member States, as well as Norway, Liechtenstein, and Iceland. Additionally, a Technical Assistance programme has been incorporated within the fund to assist member states with lower levels of effective participation in the Innovation Fund. The list of beneficiary countries includes Austria, Croatia, Cyprus, Czechia, Estonia, Denmark, Germany, Greece, Hungary, Ireland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, Portugal, Romania, Slovakia, and Slovenia. Technical Assistance is made available upon request to these countries.

Financed by revenues generated from allowances within the EU Emissions Trading System (ETS), the Innovation Fund's total funding is closely tied to the prevailing carbon price. It is estimated to reach approximately €40 billion between 2020 and 2030, assuming a carbon price of €75 per ton of CO_2.

The Innovation Fund places a strong emphasis on highly innovative technologies within several key categories, including:

- Renewable Energy
- Energy Storage
- Carbon Capture and Storage
- Carbon Capture and Utilization
- Cross-cutting technologies that encompass combinations of the above activities.

The fund is flexible when it comes to disbursing grants, ensuring that financing aligns with the unique needs and milestones of each project throughout its lifecycle.

Importantly, Innovation Fund grants can be leveraged in conjunction with funding from other support programmes, such as Horizon Europe, InvestEU, Modernisation Funds, Just Transition Fund, and various other initiatives, fostering collaborative and holistic approaches to innovation and sustainability.

Opportunities for social and affordable housing renovation

In order to secure funding, renovation projects need to exhibit a necessary level of maturity concerning their planning, business model, and the establishment of robust financial and legal frameworks. This rigorous evaluation process ensures that selected initiatives are well-prepared to embark on a path to successful implementation.

To be eligible for grants from the Innovation Fund, renovation projects must also exhibit the potential for substantial reductions in greenhouse gas emissions. Suitable projects have been categorized based on their scale, each corresponding to expected capital expenditures. The following classification has been established within the fund, particularly applicable to district-level projects focused on social and affordable housing renovation:

1. General Decarbonization Small-Scale Projects: Capital expenditure ranging from €2.5 million to €20 million.
2. General Decarbonization Medium-Scale Projects: Capital expenditure ranging from €20 million to €100 million.
3. General Decarbonization Large-Scale Projects: Capital expenditure exceeding €100 million.
4. Pilot Projects: Capital expenditure limited to €2.5 million or less.

By adhering to these classifications, projects in the realm of social and affordable housing renovation can better align with the fund's criteria, ultimately fostering the attainment of energy-efficient, sustainable, and environmentally responsible housing solutions.

How to apply

During the entirety of the Innovation Fund's duration, which spans from 2020 to 2030, periodic calls for project proposals will be conducted on the Funding and tender opportunities website. Prospective applicants must respond to specific calls for proposals. The application process involves:

- Identifying suitable funding opportunities and comprehending application conditions.
- Crafting a robust proposal that meets the call's objectives.
- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.

The selection process is stringent, valuing innovation, project maturity, scalability, and cost-efficiency. Interested parties should carefully prepare their proposals in alignment with the Fund’s objectives and submit them for periodic evaluations scheduled until 2030.

3.4.5. LIFE Programme

General description

The primary goal of LIFE is to contribute to the European Union's transformation into a climate-neutral and resilient society. The LIFE Programme for the period 2021-2017 is structured into four sub-programmes: Nature and Biodiversity, Circular Economy and Quality of Life, Climate Change Mitigation and Adaptation, and Clean Energy Transition.

LIFE Programme supports public authorities, non-governmental organizations, and private actors, particularly small and medium-sized enterprises, in fostering a transition toward a sustainable, energy-efficient, renewable energy-based, climate-neutral, and resilient economy. This, in turn, contributes to sustainable development. In the following sections, the opportunities for promoters are listed according to LIFE's sub-programmes.

3.4.5.1. LIFE Climate Change Mitigation and Adaptation

Opportunities for social and affordable housing renovation

It provides action grants for best practice, pilot and demonstration projects that contribute to the reduction of greenhouse gas emissions. The climate mitigation sub-programme supports projects, among others, in the areas of renewable energies and energy efficiency. The sub-programme also promotes integrated approaches, to implement climate change mitigation strategies and action plans at regional or national level.

How to apply

Prospective applicants must respond to specific calls for proposals. The application process involves:

- Identifying suitable funding opportunities and comprehending application conditions.
- Crafting a robust proposal that meets the call's objectives.
- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.

3.4.5.2. LIFE Clean Energy Transition

Opportunities for social and affordable housing renovation

With a budget of nearly €1 billion for the 2021-2017 period, LIFE Clean Energy Transition aims to facilitate the transition toward an energy-efficient, renewable energy-based, climate-neutral, and resilient economy by funding coordination and support actions (Other Action Grants) across Europe. These actions hold high EU added value, addressing market barriers that hinder the socio-economic transition to sustainable energy. They typically involve multiple

small and medium-sized stakeholders, local and regional public authorities, non-profit organizations, and consumers.

Box 16 presents VECO project, which received a grant under the LIFE Clean Energy Transition programme in 2022.

Box 16: VECO – "Versnelling Energietransitie Woningcorporaties" which means "accelerating the energy transition of housing corporations"

The VECO project, short for "Versnelling Energietransitie Woningcorporaties" (accelerating the energy transition of housing corporations), aims to develop a digitalized and fully integrated approach involving all stakeholders in the energy renovation process of social housing buildings. It introduces an innovative financial solution for retrofitting based on the successful experience of the FITHOME project, which used the "betterment tax" (an on-tax financing mechanism) to fund energy renovations in private homes. VECO will adapt this approach to fund energy renovations in social housing corporations. The betterment tax, collected by Dutch municipalities, will finance specific improvement projects at neighbourhood level in their respective jurisdictions, including for example parks, playgrounds, or parking lots. All property owners benefiting from neighbourhood improvements will be subject to the betterment tax. The project has secured €1.1 million in funding through the LIFE CET programme.[60]

How to apply

Prospective applicants must respond to specific LIFE calls for proposals available on the Funding and tender opportunities website. The application process involves:

- Identifying suitable funding opportunities and comprehending application conditions.
- Crafting a robust proposal that meets the call's objectives.
- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.

[60] https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE22-CET-VECO-101120561/ecovista

3.4.6. Single Market Programme

General description

With a budget of €4.2 billion for the 2021-2027 period, the Single Market Programme (SMP)[61] is dedicated to enhancing the EU's internal single market and facilitating Europe's recovery from the Covid-19 pandemic. The programme prioritizes activities that contribute to the effective functioning and governance of the EU internal single market. The SMP offers funding to civil society organizations, SMEs, local, regional, or national authorities, and educational institutions in EU Member States, as well as Iceland, Norway, and Lichtenstein.

The SMP finances mechanisms aiming at facilitating decision-making processes, supports data gathering and analysis, and conducts studies and evaluations. It also focuses on capacity building, joint actions between EU countries, strengthening expertise exchange, and setting common European standards. The SMP aims to ensure food safety, high consumer protection, support small and medium-sized businesses (SMEs), enhance the effectiveness of the single market, produce high-quality European statistics, and develop effective European standards.

Opportunities for social and affordable housing renovation

This programme does not provide direct funding for building renovations. However, it offers opportunities for SMEs and other entities to enhance their capabilities and contribute to gaining know-how. Through this programme, social economy entities (such as non-profit organizations and social housing organisations) can access resources and opportunities to enhance their impact, aligning with the broader goals of strengthening the EU's internal market. Recent years have seen an increasing focus on boosting entrepreneurship with a positive social impact, sustainability, and resilience. Social economy businesses can benefit from SMP funding opportunities that help them scale up, access new markets, and promote social entrepreneurial skills.[62] Social economy businesses are supported to scale up and create joint initiatives with mainstream businesses and public authorities.

How to apply

Organizations interested in the SME support pillar of the SMP can respond to calls for proposals and tenders launched via the Funding and tender opportunities website. These calls are managed by EISMEA and DG GROW. The application process involves:

- Identifying suitable funding opportunities and comprehending application conditions.
- Crafting a robust proposal that meets the call's objectives.

[61] https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/single-market-programme/overview_en

[62] https://social-economy-gateway.ec.europa.eu/eu-funding-programmes/european-single-market-programme-smp_en

- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.

3.5. Technical Assistance facilities

3.5.1. EIB – ELENA Facility

General description

While not a direct financing mechanism, the ELENA facility[63] plays a crucial role in co-financing technical support to enhance energy efficiency and the utilization of renewable energy in urban areas. This assistance aims to facilitate the execution of energy-related projects that may not be financially viable independently but carry significant public benefits. The support spans three key areas: Energy efficiency, Sustainable residential initiatives, and Urban transport mobility, with a specific focus on social and affordable housing renovation within the Sustainable Residential category.

The ELENA facility typically extends support to projects with an investment size exceeding €30 million, which are expected to be implemented within a three-year timeframe, although exceptions can be made for residential buildings.

The facility encourages the aggregation of different projects to enhance attractiveness for contractors and financiers. ELENA provides grants to its beneficiaries, which can be allocated to various critical areas, including technical studies, energy audits, tendering procedure preparation, business planning, financial advisory, project bundling, legal counsel, and project management. These activities, often costly at the initial stages of project development, can pose challenges for non-profit organizations.

Opportunities for social and affordable housing renovation

ELENA is accessible to a range of entities, including government organizations, regional, local, and municipal authorities, public corporations, financial institutions, private entities, social housing associations, and homeowner associations. It is important to emphasize that ELENA technical assistance projects are not intended to generate profits.

ELENA offers specific support for the following types of projects:

1. Energy Efficiency: Supports projects that improve energy efficiency and renewable energy use in both residential and non-residential buildings. This includes solar panels, public lighting, district heating, and smart grids.
2. Sustainable Residential Projects: Assists private individuals and homeowner associations in implementing energy efficiency renovations and renewable energy projects for residential buildings, including social housing.
3. Urban Transport and Mobility: Focuses on innovative transport and mobility projects in urban areas that save energy and reduce emissions. This encompasses a wide range of

[63] https://www.eib.org/en/products/advisory-services/elena/index.htm

projects, from alternative fuels in urban mobility to energy-efficient urban transport systems.

An example of a project related to Energy Efficiency for social housing can be seen in Box 17.

Box 17: ELENA project – Access to sustainability for tenants through energy-effective retrofit (ASTER)

The ASTER project sought ELENA's support to develop an investment programme for integrating photovoltaics into social housing in Flanders, aimed at reducing energy costs for tenants. ELENA provided specific assistance, including PV installation in a portfolio of social housing units, conducting building audits, preparing tenders for an Energy Service Company (ESCO), and offering legal and financial guidance. This project anticipates an investment of €42 million, to be financed by third-party financiers and VMSW, the public agency responsible for funding social housing investments in Flanders.

How to apply

To commence the application process, interested parties must submit an initial proposal via email and complete the relevant application forms, ensuring their project aligns with the eligibility criteria. The European Commission grants final approval based on an assessment by the ELENA team.

To initiate the application, it is advisable to follow these steps:

1. First verify that the project fits within the eligible framework. It is possible to submitting a pre-application form directly to elena@eib.org and receive confirmation of compliance with criteria.
2. Once the project is pre-selected, guidance for the subsequent application steps will be provided by the ELENA team.
   For projects involving energy renovation for housing, the "ELENA application form for energy and residential projects" should be uses. It's essential to include a signed declaration from the applicant.
3. All required documents must be submitted to the ELENA support group. The European Commission makes the final decision to approve or reject the project, based on the evaluation conducted by the EIB.

3.5.2. European City Facility (EUCF)

General description

The European City Facility (EUCF) is an EU-funded facility that offers both technical and financial support to municipalities and local authorities. Its primary aim is to help them create investment concepts that accelerate their transition towards more sustainable energy practices. EUCF provides lump-sum grants of €60,000 to cover various services and activities essential for developing investment concepts for energy transition projects. These services include technical feasibility studies, market analyses, stakeholder assessments, legal, economic, and financial analyses, as well as risk assessments, among others.

It's important to note that the EUCF grant is not intended for financing the actual investment itself but rather for the development of the investment concept. This concept serves as a valuable tool to secure the necessary investments. The initiative seeks to address two key challenges faced by local authorities in sustainable energy investments: the lack of technical and financial capacity and the need for support in developing robust investment concepts.

Opportunities for social and affordable housing renovation

Local authorities from the 27 EU Member States, as well as Ukraine and Iceland, are eligible to receive support from the EUCF. To qualify, they must have a Sustainable Energy and Climate Action Plan (SECAP) established within the Covenant of Mayors for Climate & Energy initiative or possess another local climate or energy plan with mitigation objectives. Eligible local authorities or municipalities can submit projects, specifically focusing on the renovation of public social housing, under dedicated EUCF calls.

Once granted, the EUCF provides access to a network of national experts who assist cities in developing credible and scalable investment projects. These projects are expected to attract both public and private investments.

How to apply

Prospective applicants must respond to specific calls for proposals available on the EUCF website. The application process involves:

- Crafting a robust proposal that meets the call's objectives.
- Submitting the proposal for review, where it undergoes admissibility and eligibility checks.
- Awaiting evaluation by an independent committee.

Applications are evaluated based on 4 evaluation criteria:

1. The ambition of the proposed investment concept.
2. The governance structure for the development of the investment concept.

3. The strategy for engaging stakeholders.
4. The overall coherence and plausibility of the proposal.

3.5.3. Technical Assistance of the European Energy Efficiency fund (EEEF)

General description

The EEEF's Technical Assistance (TA) Facility,[64] following the European Commission's TA Facility, supports public entities in developing bankable sustainable energy investment programmes. This initiative focuses on energy efficiency, small-scale renewable energy, and public urban transport, aiming to bridge the gap between sustainable energy plans and actual investments. The EEEF offers consultancy services to assist beneficiaries in preparing for sustainable energy projects, including feasibility studies, energy audits, and assessing economic viability.

Opportunities for social and affordable housing renovation

EEEF's TA Facility is particularly relevant for social and affordable housing renovations due to its focus on energy efficiency and sustainable projects. The TA Facility can support housing renovation projects that aim to improve energy efficiency or incorporate renewable energy solutions. By leveraging the expertise provided through the EEEF, housing projects can become more sustainable, cost-effective, and environmentally friendly, aligning with broader EU goals for energy and sustainability.

Eligible applicants include regions, city councils, universities, public hospitals, and other public entities within the EU. The application process involves submitting a detailed proposal, outlining the project's potential, size, impact, and savings, as well as the TA required.

How to apply

Proposals are evaluated based on criteria such as the investment programme's realization potential, TA requirements, commitment to implementation, and proposal clarity. The TA Facility operates on a first-come, first-served basis, subject to fund availability and sectoral interest. There is no submission deadline, and successful applicants are required to complete the TA work scope within two years, including tender publication for project implementation works.

[64] https://www.eeef.lu/news-detail/the-technical-assistance-facility-of-the-european-energy-efficiency-fund-eeef-receives-funding-from-the-elena-facility-of-the-european-investment-bank-eib.html

4. Country specific financing schemes for social and affordable housing renovation: Netherlands, France, Lithuania, Spain

4.1. Financing renovation of affordable housing in the Netherlands

4.1.1. Introduction: social and affordable housing in the Netherlands

In January 2020, the **Netherlands** had 7.9 million homes[65], and approximately 1.6 million buildings built before 1940. Construction peaked between 1960 and 1990 resulting in an average age of the housing stock of 41 years. In early 2019, 57% of Dutch homes were owner-occupied, while 43% were rental properties[66]. The Dutch housing market is characterised by a large social sector which is the largest in Europe[67]: approximately 75% of the 3 million rental homes in the Netherlands belong to housing associations[68].

Social housing organisations emerged from private initiatives in the nineteenth century, when socially active citizens, business owners, and religious organisations became concerned about workers' deplorable living conditions. The Housing Act was signed in 1902 and recognizes affordable housing as a shared national responsibility in the Netherlands.

Dutch social housing organisations are private and are divided into two sorts:

- Non-profit cooperatives, which own 70% of the social housing stock[69]; and
- for-profit landlords.

When carrying out an energy rehabilitation on a residential building belonging to a social housing organization, the latter must establish with the tenants, local authorities and other stakeholders a "performance agreement" where the works to be carried out and their cost are determined according to the real needs of the dwellings.

[65] Ministry of the Interior and Kingdom Relations

https://enr-network.org/wp-content/uploads/Long-Term-Renovation-Strategy-of-the-Netherlands-feb-2021-gecomprimeerd.pdf

[66] https://longreads.cbs.nl/the-netherlands-in-numbers-2020/how-many-dwellings-in-the-netherlands/

[67] https://www.pbl.nl/sites/default/files/downloads/PBL2018_Policy-and-practice-affordable-housing-in-the-Netherlands_3336_0.pdf

[68] https://www.government.nl/topics/housing/rented-housing

[69] OECD, 2020

In the Netherlands, 14% of the population is below the poverty line[70]. Therefore, very low-income households are the main target for the social dwellings. Additionally, lower-middle-class families who are unable to find suitable housing on the market make up the secondary target. The elderly, people with disabilities, students, refugees, and the homeless are additional target groups. In terms of housing typology, 53% of the social housing units are multi-family buildings (apartments), 41% are single-family dwellings (houses) and the remaining 6% correspond to other types of housing[71].

The nation's agenda includes renovation of the housing stock as a key item: the Energy Agreement for Sustainable Growth, drafted by the State and signed by the different housing associations. Under this agreement, housing associations in the Netherlands should have an average energy performance label B for their properties. On the other hand, 80% of private rental housing, should have a minimal label C.

[70] https://borgenproject.org/tag/poverty-in-the-netherlands/#:~:text=Around%202.5%20million%20people%20in,lives%20below%20the%20poverty%20line.

[71] *The financing of renovation in the social housing sector*, Housing Europe, Groupe Caisse des Dépôts, L'Union Sociale pour l'Habitat

4.1.2. Guarantee Fund for Social Housing (WSW)

General description

Social housing organisations can benefit from a sectoral guarantee fund called the **Guarantee Fund for Social Housing (WSW),** which is a private organisation created by the social housing associations themselves, in order to facilitate their financing. In addition, the WSW has an agreement with the State, which allows it to access state funds that would cover housing associations' defaults in certain cases. Therefore, the WSW offers a solid structure that allows social landlords to obtain financing on favourable terms.[72]

This guarantee facilitates the mobilization of private capital from financial institutions, particularly in terms of loans.

Opportunities for social and affordable housing renovation

WSW is a mutual guarantee company with a robust system to guarantee loans for housing associations. They take on payment obligations if a corporation can't meet them, enabling housing associations to secure loans more affordably. To safeguard against claims on guarantees, WSW has multiple buffers, including the corporation's asset buffer, risk capital, collateral monetization, mutual guarantees among corporations, and agreements with the government and municipalities for interest-free loans if needed. This structure supports WSW in assisting corporations with their primary focus on building and maintaining social housing.

The conditions for loan guarantees provided by WSW are as follows:

- Participant Eligibility: WSW guarantees loans exclusively for housing associations registered as participants. The guarantee is limited to financing social rental housing and Services of General Economic Interest (SGEI).
- Backstop Agreements with Municipalities: The participant's municipality, where SGEI registered property is owned, must have a current back-up agreement with WSW. If it's a limited backstop agreement, the loan must adhere to specified limits.
- Financial Institution Requirements: Participants are allowed to engage in transactions only with financial institutions that meet the criteria outlined in the Housing Act, article 21c.
- Standard Loan Documentation: The loans eligible for guarantees must adhere to 'plain vanilla' principles, emphasizing simplicity, clarity, and transparency. Additionally, approved standard loan documentation must be used.

How to access

[72] https://dkvwg750av2j6.cloudfront.net/m/6c2c81c93f5a9522/original/Brochure-Aedes-Dutch-social-housing-in-a-nutshell-examples-of-social-innovation-for-people-and-communities-2016.pdf

In order to access this guarantee, the Rules of Participation must be followed. The Regulations of Participation are the 'contract' between WSW and the participating corporations. It contains the rights and obligations of the participants and the agreements that WSW makes with the participants.

WSW participants can obtain loans for SGEI financing needs in accordance with the Regulations of Participation. The steps for applying for and granting a guarantee are as follows.

- Draft Loan Agreement: The corporation initiates a draft loan agreement with a financier and the draft is then sent to WSW for review.
- WSW Application Check: WSW assesses whether the draft agreement aligns with their policy. They verify that the loan is obtained from a compliant financial institution. Current backup agreements and adherence to the guaranteed ceiling are checked. Compliance with municipal agreements is also assessed.
- Financier Notification: WSW informs the financier if conditions are met for finalizing the loan agreement.
- Final Loan Agreement: Upon approval, the financier prepares the final loan agreement for the corporation's signature. WSW conducts a thorough check upon receipt.

Further information can be accessed on the the WSW website "Applying for and obtaining security".

4.1.3. Government grants and subsidies

General description

The **government grants and subsidies** are managed by the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland, RVO) which is an executive body of the Dutch Ministry of Economic Affairs and Climate Policy.

Government grants and subsidies are designed to help both social landlords and homeowners.

The government has planned that 300,000 existing homes and other buildings would be made more energy-efficient every year. Therefore, many financing schemes exist for private homeowners to help them finance the energy renovation of their homes.

Opportunities for social and affordable housing renovation

The RVO offers various grants for different energy renovation actions.

In fact, social landlords can apply for grants under two incentive schemes to help them fulfil their rental agreements through housing renovation:

a. The **Energy Performance Incentive Scheme for the Rental Sector (STEP)** provides landlords with the opportunity to improve the energy efficiency of their rental properties. The amount of the grant depends on the Energy Performance Certificate reached after the renovation. In 2016, a social housing association could obtain up to €9,500 per dwelling. However, this scheme doesn't exist anymore in 2023.

b. Incentive scheme **for natural gas-free rental homes (SAH)** provides subsidies (up to €5,000 per dwelling for 2020-2023) for existing homes that will disconnect from natural gas within 5 years.

Other three types of funding were created to replace the homeowner's energy saving subsidy (SEEH):

a. For principal residence owner-occupied homes, the investment grant for **sustainable energy and energy saving (ISDE)**[73] (2023 – 2030) will help homeowners finance energy-saving and sustainable measures in their existing home: solar boilers, (hybrid) heat pumps, insulation measures, connections to a heating network and an electric cooking facility. Insulation measures include façade or cavity-wall, soil or floor, roof, attic or attic floor insulation, glass, window frames and doors replacement. The funding amount for insulation doubles if two or more insulation measures are taken or if the measure is combined with a heat pump, solar boiler, or connection to a heat network.

[73] https://www.rvo.nl/subsidies-financiering/isde/woningeigenaren/isolatiemaatregelen#aanvragen

b. For multi-family buildings' renovations by Owners Association (VvE), the **Sustainable Subsidy Scheme for Owners' Associations (SVVE)** (2023 – 2027) can finance insulation or other energy-saving measures, a heat pump, solar boiler, or a connection to a heat network[74]. The insulation actions that can be financed are the same as the ISDE, as well as an energy-efficient ventilation system, dynamic water-side adjustment of the heating system, energy displays such as energy-management systems, and smart thermostats. For very energy-efficient renovation, a dedicated very energy-efficient package (ZEP) exists and requires the insulation of the entire existing thermal shell by setting high insulation values. It is particularly suited for zero-on-the-meter renovations and enables a bonus of €4,000 per apartment. As for the ISDE grant, the funding amount of the SVVE doubles when two or more measures are taken.

c. For mixed VvE (Associations of Owners with a mix of owner-occupiers and owners who rent out the house), the **incentive scheme for natural gas-free rental homes (SAH)** applies for renovations that include complete gas removal (for heating, DHW and cooking) within five years. This scheme was created to participate in the Dutch Climate Agreement's goal of removing all homes from natural gas by 2050. A grant can be obtained for internal housing costs for home modifications and the cost of connecting to a heating network.[75] The grant amount is a maximum of €5,000 per home.

How to access

The Subsidy and Funding Guide explain in detail how to access grants and subsidies. Customized overview of applicable schemes directly from the RVO can be obtained by specifying the project promoter's identity and its purpose.

[74] https://www.rvo.nl/subsidies-financiering/svve/verduurzamingsmaatregelen

[75] https://www.rvo.nl/subsidies-financiering/sah

4.1.4. Own equity and bank loans

General description

Since the early 1980s, the Dutch government has gradually reduced its financial support to social and housing associations to encourage them, including private home ownership, to be financially independent from government grants.

Therefore, most of the funding for housing renovations comes from housing associations' **own equity and bank loans** (75% in 2015). The remaining funding (25% in 2015) comes from government subsidies:

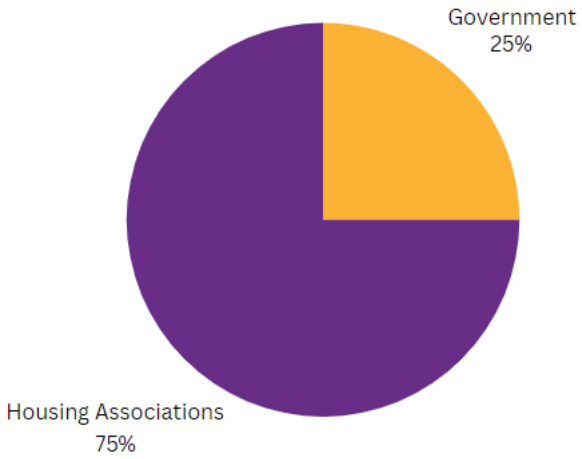


Figure 6 - Investment in energy efficiency[76]. The pie chart divides the total cost of renovation based on the % of the contributions. The chart is divided into two parts, in purple, 75% of the financing is provided by housing associations, including rent contribution when agreed by tenants. In yellow, the remaining 25% provided by the Dutch government.

The collective assets of all social housing associations are used as collateral for financers through the Social Housing Guarantee Fund (WSW, explained above), which also watches over risk management. Ultimately, bank loans are backed up by the Dutch State and municipalities, which act as potential guarantors of last resort. This results in more favourable financing terms and counter-cyclical investments, without any direct government subsidies for new investments.

Opportunities for social and affordable housing renovation

In addition to the traditional housing association tasks - sufficient, affordable rental housing for people with lower socio-economic status - the housing associations are also asked to take the lead in making houses and residential areas more sustainable. With the Climate Agreement of 2019, the Netherlands aims to reduce greenhouse gas emissions in line with the Paris UN Climate Agreement. The goal for the Netherlands is to emit 49% less greenhouse gases by

[76] The financing of renovation in the social housing sector, Housing Europe, Groupe Caisse des Dépôts, L'Union Sociale pour l'Habitat

2030 than in 1990, and up to 95% less in 2050. The agreements in the Performance Agreement also bind the associations to making sure their housing stock meets the sustainability requirements. For instance, the agreement includes a speeding up of renovating homes with energy labels E, F and G, so that there are no more homes with those labels as of 2028.[77]

For this reason, and thanks to the Guarantee Fund for Social Housing, many local banks have financial products available as loans for the financing of energy-efficient renovations in the Dutch social housing stock. In order to find out whether projects can be financed, it is recommended to contact directly the financial institution that can provide the loans or the WSW, which is in charge of deploying the guarantee fund.

How to access

Contact WSW's partner financial institutions directly or directly to WSW to find out about the steps and documentation required to benefit from loans with longer repayment periods and lower repayment rates than those on the market designed for social housing associations.

[77] Impact Report BNG ESG Bonds for Duch Housing Associations. July 2021

4.1.5. ESG bonds

General Description

BNG Bank is a Dutch promotional bank and has traditionally been the bank for the public authorities and the public interest in the Netherlands. The bank is owned by the Dutch central government (50%) and local governments (50%) in the Netherlands, and it has provided financing to the public sector since 1914, at competitive terms and conditions. Its clients are Dutch local authorities and institutions that are active in the social housing, healthcare, education, energy and infrastructure sectors. The majority of loans provided by the bank (more than 90%) are granted to or guaranteed by government bodies.

BNG Bank's mission statement is 'Driven by social impact'. This purpose is leading for all BNG Bank's activities. Instead of maximizing profits, its priority is to maximize the social impact of its activities.

In 2014, BNG Bank developed an ESG issuance framework in cooperation with PON-Telos. Under this framework, the most sustainable municipalities and social housing associations were selected. The loans provided to these "best-in-class" performing core clients were consecutively funded with proceeds from the ESG bonds which the bank issued. This framework was successfully deployed until 2020. The launch of the UN SDGs, as well as the launch of BNG's Road to Impact strategy- provided a logical backdrop to modernize the framework in 2021. As a result, the BNG Sustainable Finance Framework was launched in that year. It is under this ESG framework that BNG Bank has issued ESG bonds for Dutch municipalities and social housing associations since 2021.[78]

Opportunities for social and affordable housing renovation

The Sustainable Finance Framework follows the four key pillars of the ICMA Green Bond Principles (GBP) and Social Bond Principles (SBP), and of the LMA Green Loan Principles (GLP): Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting. Given this structure, the framework is divided in two sub frameworks that each focus on a different client group in terms of use of proceeds:

- Sub-framework I for loans to Dutch municipalities
- Sub-framework II for loans to Dutch social housing associations

BNG Bank holds a prominent position as the primary financier of the Dutch social housing sector, with its mandate and operations specified in the Dutch Housing Act and the Rules of Participation of the Social Housing Guarantee Fund (WSW). The scope of activities eligible for financing under a WSW guarantee is consequently limited. Therefore, the projects eligible for financing under this scheme are subject to the rules set forth by WSW.

[78] Ibid

How to access

Loans and financial products from BNG Bank through ESG Bonds can only be accessed by municipalities or a social housing association in the Netherlands. Information about this mechanism can be found directly on BNG Bank website where specific information can be requested through its contact section.

4.1.6. National Heat Fund (Energy Saving Loan)

General Description

Owner-occupied dwellings can also obtain a loan with favourable terms for their energy-saving renovation from the **National Heat Fund** (Nationaal Warmtefonds) through the Energy savings loan[79].

Polestar Bemiddeling was chosen to provide the Energy Saving Loan on behalf of the Heat Fund and take care of the management and administration of the loan. The conditions depend on the type of borrowers:

a. A **homeowner** can borrow a maximum of €65,000 and low-income owners can have a zero-rate loan (instead of a 4-4.5% rate)[80].

b. **Owners' associations** (VvEs) of at least two apartments with a residential function can obtain a VvE Energy savings loan of up to €30,000 per apartment. For a Very Energy-Efficient Package or a Very Energy-Efficient Package + / Zero on the Meter renovation, VvEs can obtain up to €50,000 or €65,000 per home respectively. The loan amount is deposited in a building fund account. The interest and repayment become part of the VvE contribution, so that each owner pays as long as he/she owns the apartment.

Opportunities for social and affordable housing renovation

Homeowners and owners' associations can avail themselves of this loan if their project aligns with one or more of the eligible measures, which include:

- Isolate: Asbestos remediation with roof insulation, Roof insulation, Façade insulation, High efficiency glass. Insulating doors, frames and panels, Cavity wall insulation, Floor insulation, Attic floor and loft floor insulation
- Heat: Connecting to the heat network, High efficiency boiler, HRe boiler, Low temperature delivery system, Heat recovery system, Heat pump, Hydronic adjustment, Solar water heater, Solar panels
- Ventilate: CO_2-controlled ventilation, DC fan, DC pump
- Combination of measures: Very Energy Efficient Package, Very Energy Efficient Package + / Zero on the Meter
- Advice, guidance and management: Tailor-made advice, Energy monitor with smart meter link

[79] https://www.warmtefonds.nl/

[80] https://www.warmtefonds.nl/particulieren, conditions in early 2023

Detailed information about the measures for which the loan is provided can be found on the Heat Fund's website (available only in Dutch).

Funding applications can be submitted for one or multiple measures and the loan amount can range from a minimum of €1,000 to a maximum of €65,000.

The National Heat Fund also finances VvEs in which housing associations own more than 50 per cent of the homes, allowing mixed housing corporations properties to finance their energy renovations more easily.

How to access

Individuals is interested in applying for a loan to enhance the sustainability of their home through one or more of the mentioned measures, it is advisable to consider the following recommendations and steps:

a. Before initiating the application process, it is essential to have a realistic understanding of the anticipated costs and the budget required for borrowing.
b. Once a thorough review of the selected measure(s) and their associated costs has been conducted, a non-binding request can be initiated through the online form.
c. Upon the submission of the application, an email containing instructions to activate the personal account on Mijn Warmtefonds will be received.
d. Within this account, a detailed quote outlining the proposed loan, along with the associated monthly costs and duration, can be found.
e. If the provided quotation is acceptable, applicants will be prompted to furnish additional information, and the fund will assess whether the requested funding can be granted.
f. In case of rejection, individuals will receive notification detailing the specific reasons for the decision.

4.2. Financing renovation of affordable housing in France

4.2.1. Introduction: social and affordable housing in France

In 2020, there were 36 million dwellings in metropolitan France, of which 29.5 million were primary residences, 3.5 million were secondary or occasional residences, and 3 million were vacant. The principal residences are divided into 16.5 million individual houses and 13 million multi-family buildings[81]. According to the Ministry of ecological transition, in early 2021, nearly 60% of French households own their primary residence and 40% are tenants, of which 23% live in private rental dwellings, and 17% in a social dwelling[82].

Social housing owners are divided into 3 categories of social housing organisations:

1. OPH - public housing organization – (37% of the stock);
2. ESH - social housing company - (43% of the stock);
3. COOP'HLM- social housing coopérative (3% of the stock)
4. EPL – semi-public companies (17% of the stock)

There is a large majority of multi-family buildings in the social French housing stock (85% of the stock are dwellings), mainly built in the 1960s and 1970s.

In 2020, the 36% of families living in social rental housing and 26% of homeowners were in a situation of energy poverty[83]. This high rate of energy poverty, within social housing associations, is due more to low household incomes (35% of these tenants have incomes below the poverty line, compared to 15% of the French population in general) than to the energy efficiency of the social housing stock, which is generally of better quality than private housing.

In France, energy renovation works can benefit from public incentives in several ways. On the one hand, these actions benefit from a reduced VAT rate, and on the other hand, the government offers grants through the various administrations. Soft loans exist to finance renovation work, depending on the type of work and the income of the owners. Landlords can also benefit from a relief on property tax on built properties (TFPB) proportionate to the expenses of the work.

[81] Source : Insee ; ministère de la Transition écologique et solidaire, Service de la donnée et des études statistiques (SDES) ; estimations annuelles du parc de logements au 1er janvier 2020.

[82] https://www.statistiques.developpement-durable.gouv.fr/edition-numerique/chiffres-cles-du-logement-2022/11-locataires-du-parc-social

[83] ONPE and CDC Habitat, 2020

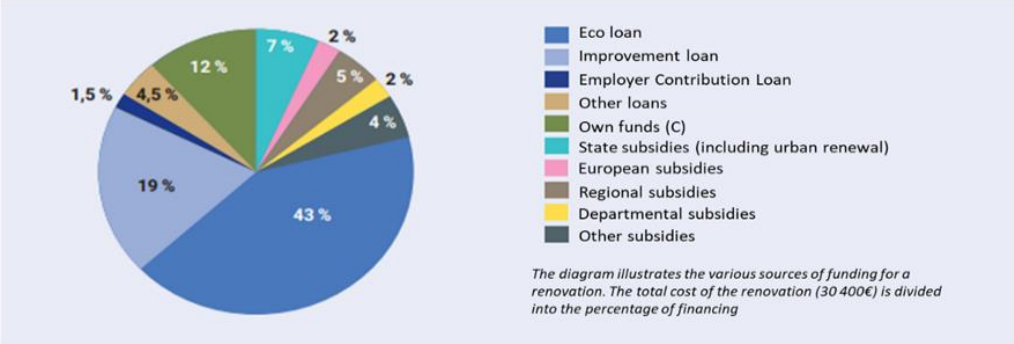


Figure 7 - Financing of energy renovation among low-income housing organizations in France in 2010-2014

4.2.2. Low-interest loans

General description

Most financing for energy renovation for social housing is **low-interest loans** (68% in 2015[84]). The *Banque des Territoires-Caisse des Dépôts* (French Territorial Bank) is the main partner of social housing organisations for renovations. It provides debt financing, investment advice and financing solutions to meet the needs of local authorities, social housing organisations and local public companies. It provides three main loans:

- The Eco loan (Eco-PLS).
- Renovation advance loan, which can also get loans from private banks.
- L'Alliance pour le logement (CDC + BEI+ CEB)

Opportunities for social and affordable housing renovation

The **eco-PTZ** is utilized to fund energy renovation projects in a residence. It is provided by certain banks and constitutes an interest-free loan, with a maximum amount of €50,000. Eligibility extends to property owners, occupants, or landlords of a dwelling constructed more than 2 years ago, located in either a metropolis or overseas. The funds are unconditionally allocated. Crucially, the renovation work must be undertaken by a company recognized as a Guarantor of the Environment (EGR).

There are three main categories of work covered by the eco-PTZ:

1. Punctual renovation work enabling the dwelling to enhance its energy performance (e.g., roof insulation, window and/or heating changes).
2. Global renovation work allowing the dwelling to achieve a minimum energy performance.

[84] Ibid.

3. Rehabilitation work on your non-collective sanitation facility using an energy-efficient system.

L'Alliance pour le logement (CDC + BEI+ CEB) is formed through the collaboration of key entities, including The Social Union for Housing (USH), the Banque des Territoires, the European Investment Bank (EIB), and the Council of Europe Development Bank (CEB). Established in 2020, this strategic partnership aims to streamline and improve the access of French social housing organizations to European funding. The European Alliance for Sustainable and Inclusive Social Housing in France plays a pivotal role in the Banque des Territoires' efforts to mobilize resources from the CEB and the EIB to support investments in social housing. The overarching objective is to ensure that French social housing operators can easily, equitably, and consistently access European funding for all types of investment projects, regardless of their size or location. The core idea is that the financing from the EIB and CEB will significantly contribute to the fight against climate change, promote social inclusion, and provide support for vulnerable populations.

How to access

To access the **Eco-PLS loan**, a step-by-step approach is outlined on the official Service-Public.fr website. The platform provides information on the three types of renovation works: One-off renovation, Comprehensive renovation, and Sanitation. Additionally, it details the maximum amount of the eco-PTZ available based on the nature of the works.

To ensure successful project implementation, follow the step-by-step approach: Choose jobs, Check the conditions, Choose company, Find the bank, Fill Folder, Receive help, Inquire about additional financing support, Do the work, Repay the loan and Forward documents justifying the completion of the work.

To avail the benefits offered by **L'Alliance pour le logement (CDC + BEI + CEB),** it is recommended to directly contact the Banque des Territoires. Social landlords, local authorities, and companies can receive support from Banque des Territoires in implementing thermal renovation projects and optimizing their investments. As the leading financier of social housing in France, Banque des Territoires is committed to long-term support for investment initiatives in various territories. The bank provides a range of financial products, including the Eco-Prêt (financing for energy renovation projects), PAM LOAN (enhancement for rehabilitation work), and PAM EIB loan (fixed rate complement to the Eco-loan).

4.2.3. Grants and subsidies

General description

Social landlords can benefit from **grants**, but there is no fixed framework for accessing to these grants. The call for proposals is therefore governed by the national or regional call for

proposals, which sets the financial amount and the project eligibility criteria, as well as the entities that can apply.

Regional and local authorities provide grants for energy renovation to social housing organisations. The French Public housing organisations (OPH) have a majority of local authorities on their board, who are particularly involved in the strategy and financing of social housing renovation operations. The private social housing companies (ESH) also work closely with local authorities to renovate dwellings.

There are mainly two agencies involved in facilitating Grants and subsidies at two different scales at the project and urban intervention level:

- The **French Agency for the Environment and Energy Management (ADEME):** Through a dwelling, building and territorial approach, it promotes the energy renovation and the advancement of renewable energies by providing grants and subsidies.The **National Agency for Urban Renovation (ANRU):** Through a district-level approach, the initiative strives to revitalize specific neighbourhoods, especially sensitive urban areas, with the overarching aim of enhancing the living conditions of their residents. Furthermore, it aligns with the State's objective to promote the development, construction, and renovation of real estate in designated geographical areas throughout France.

Opportunities for social and affordable housing renovation

The **French Agency for the Environment and Energy Management (ADEME**)[85]is active in the implementation of public policy in the areas of the environment, energy and sustainable development. ADEME also provides expertise and advisory services on energy and environmental matters to businesses, local authorities and communities, government bodies and the public at large. Overall, grants accounted for 20% of building renovations funding programmes during the 2010-2014 period[86]. ADEME offers financial support to companies, local authorities and research organisations in four areas, two of which are relevant to the development of energy renovation projects in social housing: the reduction of energy consumption and greenhouse gas (GHG) emissions, as well as the development of renewable energies and the circular economy.

The National Agency for Urban Renovation (ANRU) provides support for district-level renovation. The ANRU aims to revitalize specific neighbourhoods that benefit from grants to undergo a

[85] https://www.ademe.fr/en/frontpage/

[86] The financing of renovation in the social housing sector - A comparative study in 6 European countries – Housing Europe, Groupe Caisse des Dépôts, L'Union Sociale pour l'Habitat

profound transformation. Some of the works that are possible to undertake under this agency include the following:

- Renovation of street furniture;
- rehabilitation or destruction of old buildings;
- development of outdoor spaces;
- establishment of local shops;
- installation of new public, social and cultural facilities (media libraries, schools, etc.);
- construction of new quality programmes.

The majority of state grants are provided by this Agency, which plays a crucial role in financing the renovation of priority areas known as "ANRU zones." These zones represent neighbourhoods undergoing urban renewal projects, aimed at facilitating access to new housing at a more advantageous price. Currently, this agency is operating one new distinct programme:

- The New National Urban Renewal Program (NPNRU) [87]: Launched in 2014, the NPNRU plans the profound transformation of more than 450 priority neighbourhoods of city policy by intervening strongly on housing and public facilities, to promote diversity in these areas. It is endowed with €12 billion in grant equivalent (or €14 billion in financial assistance) allocated by the ANRU from 2014 to 2030 to financiers of district renovation (local authorities and social landlords in particular). It is funded by contributions from *Action Logement*[88] (€8.4 billion), the social union for housing (€2.4 billion), and the State (€1.2 billion).

And other two have already been finalized:

- The National Urban Renewal Program (PNRU): launched in 2004, with the birth of the ANRU, it ended in 2020. It has enabled the rehabilitation of 600 neighbourhoods in France and Overseas.
- The National Program for the Requalification of Old Degraded Neighbourhoods (PNRQAD): Launched in 2009, the PNRQAD aimed to transform degraded neighbourhoods in the old center which concentrate a large number of substandard housing. Around thirty French neighbourhoods were affected.

Not only these two agencies, but national entities also offer and implement grants and subsidies. A recent national example is the Ministry of Ecological Transition, which, as part of the 2021-2022 Recovery Plan, initiated a call for projects. This call is designed to provide

[87] https://www.anru.fr/le-nouveau-programme-national-de-renouvellement-urbain-npnru#:~:text=L'ANRU%20intervient%20de%20deux,d'euros%20de%20concours%20financiers.

[88] Action Logement is a leading player in social and intermediate housing in France. Its mission is to facilitate access to housing to promote employment. It is also a major funder of public policy for urban renewal and revitalization of medium-sized cities, and of local housing policies.

financial support to social housing organizations involved in implementing efficient and replicable industrial solutions for the energy renovation of social rental housing. Further details on this example are elucidated in **Box 18**:

Box 18: MassiRéno: a National economic recovery plan for energy renovation of social housing following the Covid crisis.

After the Covid pandemic, the French government has launched a National economic recovery plan called MassiRéno that allocates €500 million in subsidies for the energy renovation of social housing over 2021 and 2022, with:

- €445 million devoted to the financing of restructuring or deep energy retrofit of social housing.
- €40 million to support the implementation of efficient and replicable industrial solutions for energy renovation via the specific call for projects "Massification of exemplary renovation of social housing" (MassiRéno).
- And, €15 million for social rental housing in overseas regions and departments (a specific mechanism).

The project has two main ambitions: to provide financial support to social housing organisations that engage in the massification of energy renovation and to support the deployment of innovative, integrated, and efficient industrial solutions as well as low-carbon and resource-saving renovations[89].

How to access

ADEME offers a diverse array of grants and subsidies tailored to support the energy transition. Its various options can be checked on the website, it is advisable to directly contact them. Their assistance will prove valuable in comprehending the most suitable call for proposals based on the type of entity, specific needs, and the nature of the project.

ANRU is undertaking several district renewal projects under The National Urban Renewal Programme (PNRU). The management and development of this programmes center on the financing of projects primarily devised by local authorities and social landlords. To determine if these programmes are being implemented in areas of interest or to submit a proposal for implementation in a specific district, it is important to have. Clear understanding of the specifications of each programme and contact the agency directly.

[89] https://www.ecologie.gouv.fr/plan-relance-appel-projets-massification-renovation-exemplaire-du-parc-locatif-social-massireno-0

4.2.4. Own funds

General description

Social housing organizations allocate a significant portion of their internal funds, amounting to 12% during the 2010-2014 period[90]. to finance energy renovations. Their primary revenue stream is derived from rent, a portion of which can be increased following the completion of an energy renovation project on the property.

Certain associations utilize the "3rd line of tenant contribution," allowing social landlords to request tenants to contribute up to 50% of the projected energy bill savings. However, the implementation of this mechanism necessitates the prior agreement of the tenants.

Opportunities for social and affordable housing renovation

Under French property law, landlords have the authority to implement a rent increase for energy conservation works conducted on the property. This increase can take the form of either €20 per month for a maximum of 15 years or a sum not exceeding half the cost savings resulting from the reduction in energy consumption due to the works. It is essential to note that these works must be preceded by an energy audit, which furnishes information on potential cost savings.

However, tenants retain the right to decline such works in private areas of the property, although this right does not extend to communal areas.

How to proceed

Before increasing the tenant's rent, it must be expressly stipulated in the tenancy agreement. The agreement may also outline that the rent can be increased by a specified amount or formula following specific improvement works carried out by the landlord.

These works and the details of the new rent should be clearly specified in the tenancy agreement. Importantly, the works cannot be those legally required for the landlord to bring the property up to a habitable standard. Additionally, landlords cannot unilaterally decide to undertake improvement works and impose a rental increase on the tenant.

On the other hand, tenants themselves may request certain property improvements, and upon mutual agreement, a rent increase can be applied.

[90] Ibid.

4.2.5. Certificats d'Economies d'Energie (CEE)

General description

The **energy savings certificate (CEE)** [91] system, created by articles 14 to 17 of law no. 2005-781 of July 13, 2005, on the programme establishing the orientations of energy policy (POPE law), constitutes the one of the main instruments for controlling energy demand management policy. Indeed, this system is based on a three-year obligation to achieve energy savings in the CEE (1 CEE = 1 kWh cumac of final energy) imposed by the public authorities on energy suppliers (the "obligated"). They are thus encouraged to actively promote energy efficiency among energy consumers: households, local authorities or professionals. The energy savings certificate (EEC) system constitutes one of the main instruments of the energy demand control policy.

The government establishes a multi-year energy savings target, measured in cumulative actualized megawatt-hours (Cumac). This target is distributed among all energy suppliers, known as "Obligés," based on their share of the total energy supply. To meet their obligation, "Obligés" are required to promote energy-saving projects to consumers or face financial penalties.

Opportunities for social and affordable housing renovation

There are "obligated" companies that must register for EEC. These are companies selling energy (electricity, gas, fuel, fuel oil, domestic, heat, and cold) and are above a specified threshold. These companies are required to meet energy savings objectives or face fines. They can achieve these objectives by obtaining state-issued certificates or purchasing them on the market.

Other entities, although not obligated, can also obtain certificates. This includes local authorities, social landlords, and the ANAH, collectively referred to as eligible. Those neither obligated nor eligible are termed ineligible.

Obligés encourage their end customers to decrease energy consumption by promoting various energy efficiency investments, such as insulation projects or boiler renovations. These eligible projects qualify for certificates, credited by government agencies (such as the National Center of CEE) on the register.

Social landlords can take advantage of the CEE and may also participate in the process. They can request certificates (which can then be sold to energy suppliers) or engage in brokerage activities, depending on their role and status.

How to access

[91] https://www.eex.com/en/services/registry-services/french-energy-saving-certificates

The certificates issued are exclusively materialized by their registration on an individual account opened in the national register of energy savings certificates, the maintenance of which can be delegated to a legal entity. The register must also record all transactions (sales and purchases) of certificates and provide regular public information on the average exchange price of certificates. This register is accessible on the website www.emmy.fr.

Registration in the register is available for any legal entity engaged in the energy savings certificate mechanism, and it is a fundamental prerequisite for any request, purchase, or sale of CEE. This is the registration link, and the process is clearly outlined in four well-explained steps.

4.2.6. Guarantee fund for energy renovation (FGRE)

General description

In France, the government voted the TEPCV law (*Loi relative à la transition énergétique pour la croissance verte*, Law on the energy transition for green growth) in 2015 to facilitate the financing of energy efficiency improvements in existing housing through the **guarantee fund for energy renovation (FGRE)**[92].

It enables banking organisations to benefit from a guarantee when granting loans to owners of existing housing (individuals in detached houses or blocks of flats, joint owners' associations) who are financing energy renovation work. The fund also provides a counter-guarantee to insurance companies or surety companies that guarantee repayment of collective loans granted to finance energy renovation work.

Its implementation requires the conclusion of agreements, in accordance with a standard model defined by the decree of 14 March 2019, between the State and SGFGAS, on the one hand, and between the State, SGFGAS and the credit institutions, on the other.

Opportunities for social and affordable housing renovation

It enables banks to benefit from a guarantee when granting loans to homeowners (owners of a single-family home, or owners of a building, or even a homeowners' associations) who require financing for energy renovation work.

The eligibility criteria for the guarantee fund are outlined in the decree dated 11 August 2016, which supersedes the decree of 27 May 2016. Eligible parties include households with modest resources undertaking energy performance improvement projects in their homes, associations of co-owners and individual co-owners implementing energy performance enhancement projects, banks offering zero-rate eco-loans to these groups, and organizations providing guarantees for collective loans dedicated to energy renovations in co-ownership properties.

The guarantee fund can act as guarantor for loans to finance energy efficiency improvements granted to individuals with resources below certain ceilings (see below) or to co-ownership associations.

- Loans to individuals: The guarantee fund for energy renovation can guarantee the Habiter Mieux eco-loan. This loan is intended for low-income homeowners who receive support under the Anah's "Habiter Mieux" programme to finance the remaining cost

[92] Agence nationale pour l'information sur le logement https://www.anil.org/documentation-experte/analyses-juridiques-jurisprudence/analyses-juridiques/analyses-juridiques-2016/fonds-de-garantie-pour-la-renovation-energetique-fgre/#:~:text=Le%20fonds%20de%20garantie%20pour%20la%20r%C3%A9novation%20%C3%A9nerg%C3%A9tique%20peut%20garantir,%C3%A0%20charge%20de%20leurs%20travaux.

of their work at zero interest. The fund can also guarantee the zero-rate eco-loan granted to owner-occupiers and landlords (natural persons) carrying out work. The dwelling must be occupied by people whose income is below the ceilings for Anah assistance.

- Loans to condominiums: The fund may counter-guarantee joint and several guarantees for collective loans granted to condominium associations (collective eco-loans and bank loans) provided that these loans finance work to reduce the building's conventional primary energy consumption3. The percentage reduction to be achieved will be set by decree.

How to access

Individuals, landlords, and housing associations can benefit from this guarantee when undertaking energy renovation projects and requiring a loan to fund them. To access this support, it is advisable to directly approach a bank and inquire about it.

For loans to individuals, the fund can guarantee Eco-PTZs (Eco-loans and complementary Eco-loans, subject to resource ceilings, "Habiter Mieux" Eco-loans) granted to individuals up to 75% of the credit claims amount.

Regarding loans to condominiums, the fund may counter-guarantee joint, and several guarantees issued to secure collective loans taken out by condominium associations. These loans can be used to finance work on communal areas, initiatives of collective interest on private areas, property acquisitions, or the pre-financing of public subsidies.

4.2.7. Financial aid

Description:

Concerning **financial aid** for the renovation of private housing, they are regulated and managed by the National Housing Agency (Anah), which is a public entity under the supervision of the ministries of Territorial Cohesion and Relations with local authorities, Ecological Transition and the Economy, Finance and Recovery. Its mission is to improve the state of the existing private housing stock and to fight against social and territorial fractures. The Anah encourages renovation and rehabilitation of housing by granting financial aid to low-income owners and fragile and struggling condominiums.[93]

Opportunities for social and affordable housing renovation

The Anah deploys several financing mechanisms for low-income owners to trigger large energy renovation for individual houses and multi-apartment dwellings through **MaPrimeRénov**, either for single renovation acts or for global renovations. The aids depend on the household's incomes which are divided into four profiles: very-low-income, low-income, intermediary-income and high-income households.

Open to all, MaPrimeRénov' stands as the primary state aid for energy renovation in both mainland France and overseas territories. This state aid is available for energy renovation work to all property owners, regardless of whether they reside in or rent out their homes.

To be eligible for MaPrimeRénov' aid, certain conditions must be met, contingent upon the type of ownership—whether occupied or leased:

- Owner Occupied: Be the owner of your main residence built for more than 15 years in mainland France or for more than 2 years for accommodation located in Guadeloupe, Guyana, Martinique, Reunion or Mayotte. The work must be conducted by a company recognized as an Environmental Guarantor (RGE).
- Owner Lessor: Rent your home as your main residence for a period equal to or greater than 5 years (from the day of payment of the renovation bonus). Inform the tenant of the completion of work financed by the bonus. Deduct the amount of the premium from the total amount of work justifying this reassessment and inform your tenant in the event of a reassessment of the rent. The owner can request and accumulate the bonus for a maximum of 3 rented accommodations. Obligations to respect: rental accommodation which has high energy consumption will have to be gradually renovated.

To qualify for MaPrimeRénov' eligibility, it is imperative to undertake subsidized works, which include:

[93] https://www.anah.fr/qui-sommes-nous/

- Proper Insulation: Enhance the insulation of your home to reduce energy bills and enhance year-round comfort.
- Ventilation System: Install controlled mechanical ventilation (VMC) to efficiently evacuate and renew the air in your home.
- Heating/Water Heater System: Address the heating system, which is the primary source of energy consumption in your home.
- Regulation System: Implement a heating regulation system, such as a thermostat, to maintain a comfortable ambient temperature when needed.

How to access

On the official website, it can be found all the information necessary to access MaPrimeRénov' assistance. They also recommend conducting the procedure with the assistance of an agent.

To access to the aid, the following three steps need to be followed:

1. Determine the income scale: This is done by checking the colour associated to the specific income category.
2. Confirm eligibility: This involves checking the work qualifies and identifying the aid available based on the income scale.
3. Submit a request: This is accomplished by creating an account and submitting the subsidy application for MaPrimeRénov'.

4.2.8. National heat fund

General description

The Law on the Energy Transition for Green Growth (LTECV) aims at reaching 32% of Renewable and Recoverable Energies (RE&R) in its energy mix by 2030.

Concerning renewable heat, the State has entrusted the ADEME, since 2009, with the management of the **National Heat Fund,** with the aim of promoting the replacement of inefficient heat installations by renewable energy sources and heat recovery installations. ADEME intervene in terms of financing, studies, project management assistance, training, communication and evaluation.

Opportunities for social and affordable housing renovation

The ADEME grants aid to support the design and monitoring of such projects: studies, project management assistance, promotion, training, communication, evaluation, etc., and allocates appropriate investment grants (subsidies, reimbursable grants, etc.) to enable the project to be economically balanced and to offer a competitive price of the service to the users.

In some cases, the Heat Fund grants can be combined with grants from other partners (Region and local authorities, FEDER...) and from Energy Savings Certificates.

Industrial companies and local authorities interested in transitioning to renewable heat can explore support and financing opportunities from the National Heat Fund. To assess eligibility, they can use the eligibility calculator provided on the official website. By selecting the most suitable renewable energy option and inputting relevant details, the calculator will determine potential eligibility for support from the Heat Fund and provide an estimate of the aid amount. The results obtained can guide decision-making and inform the necessary next steps. For those uncertain about the optimal renewable energy choice, direct contact with the regional office is encouraged for personalized guidance and advice.

How to access

To access the grants funded by the National Heat Fund, it is necessary to contact ADEMA through the online form. Even if the grant simulator of the webpage indicates that a project is not eligible, ADEMA recommends reaching out to them for a more thorough examination, as the tool may not be entirely accurate and could contain errors. The purpose of this fund and these grants is to promote more efficient and decarbonized heating systems.

4.3. Financing of the renovation of affordable housing in Lithuania

4.3.1. Introduction: social and affordable housing in Lithuania

Similar to other Easter European countries, Lithuania privatized most of the housing stock since it gained independence from the Soviet Union in March 1990. As a result, in 2019[94] private natural persons owned 96.6% of dwellings and only 1.4% belongs to the State or municipalities. Therefore, social housing accounts for a very small part of the total housing available. Moreover, a high share (around 80%) of people below the at-risk-of-poverty threshold owned their property in 2017[95] and therefore, they do not have the financial capacity to renovate their homes.

Lithuania's housing strategy aims at the expansion of housing options to all social groups. However, the accessibility of social housing for a person in need remains very low, as the waiting list to get access to a social housing are very long, going up to 10-15 years[96].

Privately owned multi-apartment buildings account for about 66% of total dwelling in Lithuania[97] and most of them are connected to a district heating network. These networks supply heat to about 53% of all buildings in the country and 76% in the case of cities. The rest of the buildings use mainly biomass for heating.

In this context, it is not surprising that the key priorities in relation to buildings of the National Energy and Climate Action Plan (NECAP) of Lithuania for 2021-2030, are to promote the integrated renovation of the multi-apartment and public buildings (giving priority to renovation of residential neighbourhoods). In addition, the action plan aims at continuing making more sustainable the district heating networks. The heat losses of these networks have already been substantially reduced (from 33% to 15%) and most of the natural gas has been replaced by biomass and heat from municipal waste incinerators (from 2% in 2004 to 68 % in 2018)[98].

The existing apartments are characterized by low energy efficiency standards compared to more modern housing types. The aim is to increase their Energy Performance Certificate to C, which implies a reduction of their energy consumption of 40%. The renovation of these

[94] EUROPEAN SOCIAL POLICY NETWORK (ESPN) National strategies to fight homelessness and housing exclusion Lithuania. 2019. Page 6.

[95] EUROPEAN SOCIAL POLICY NETWORK (ESPN), op cit. Pag 6.

[96] EUROPEAN SOCIAL POLICY NETWORK (ESPN) op cit. Pag 8.

[97] https://www.fi-compass.eu/publication/case-studies/residential-energy-efficiency-financial-instruments-lithuania

[98] https://lsta.lt/en/about-dh-sector/

apartments has been slow, as only around 4% of them have been renovated up to mid-2021[99]. However, the renovation rate has significantly increased in recent years.

[99] https://www.ebrd.com/news/2021/ebrd-lends-675-million-for-greening-buildings-in-lithuania.html

4.3.2. Climate Change Programme Fund

General description

The Environmental Projects Management Agency (APVA) of the Ministry of Environment in the Republic of Lithuania is a contemporary and proficient organization specializing in the management of projects funded by the European Union, including the ISPA, European Regional Development, Cohesion Funds, and the LIFE+ programme. Additionally, APVA oversees projects related to LEIF, Climate Change, Waste Management, Environmental Support Programmes, and state-funded initiatives.

The **Climate Change Programme** supports projects aimed at mitigating the consequences of climate change through the quantitative reduction of greenhouse gas (GHG) emissions and fostering adaptation to the changes induced by climate change.

Funding for the Climate Change Programme is sourced from:

- Assigned Amount Units (AAUs): Funds received through the transfer of assigned amount units.
- Auctioned Allowances (TEA): Funds generated from the auctioning of allowances.
- Voluntary Contributions: Contributions from individuals and legal entities who voluntarily support the programme's objectives.
- Economic Fines Collection**:** Funds collected from economic fines contribute to the programme's financial resources.

The Government of the Republic of Lithuania has entrusted the Ministry of Environment with the responsibility to manage and administer the funds allocated to the Climate Change Programme.

Opportunities for social and affordable housing renovation

The funds allocated for the Climate Change Programme present various opportunities for the energy renewal of social and housing structures in Lithuania. These funds are strategically directed towards the following key areas:

- Energy Consumption and Efficiency Projects: Allocation of funds for projects focusing on energy consumption and efficiency improvement. This includes the modernization of multiapartment houses, public buildings, and the renovation (modernization) of one or two-apartment dwelling houses owned by individuals.
- Promotion of Renewable Energy Sources and Eco-Friendly Technologies: Allocation of programme funds for projects that encourage the use of renewable energy sources and the adoption of environmentally friendly technologies. This support extends to both natural persons and legal entities, such as schools, kindergartens, hospitals, and foster homes. Examples include the installation of biofuel boilers, heat pumps, or solar power plants.

- Developmental Cooperation Projects in Developing Countries: Utilization of funds for implementing developmental cooperation projects in developing countries. This involves the transfer of Lithuanian technologies and expertise, such as the establishment of solar power plants in countries like Georgia (Sakartvelo), Malaysia, and Mali.
- Public Information and Education, Scientific Research, and Consultancy: Allocation of funds for public information and education initiatives, scientific research projects, and consultancy services. These efforts aim to provide training for activity executors and other individuals involved in climate change-related endeavours.
- Reforestation and Climate Change Measures: Utilization of funds for reforestation and forest planting initiatives, along with information, education, and consultation on pertinent climate change issues.
- Administration of Programme Funds and Greenhouse Gas Registry: Resources are dedicated to the effective administration of the programme funds and financing the management of the Greenhouse Gas Registry.
- Other Measures for Effective Climate Change Policy Management: Programme funds are utilized for various measures aimed at efficiently managing climate change policies, including the execution of the plan of measures for implementing the National Climate Change Management Policy strategy.

How to access

The utilization of Climate Change Programme funds follows a structured process. The annual estimate of the programme funds is meticulously prepared by the Ministry of the Environment, outlining the approved investment areas and the corresponding allocated funding. This comprehensive estimate serves as the foundation for the annual budget plan, detailing the distribution of funds across specific financing instruments and establishing other essential financing conditions. Once both the estimate and the annual plan receive approval, the Environmental Projects Management Agency (EPMA) takes charge. The EPMA initiates calls for project proposals (registration forms) from both individuals and legal entities, overseeing the submission process. Furthermore, the agency is responsible for the reception, evaluation, and monitoring of project proposals throughout the implementation phase, culminating in the disbursement of payments to the beneficiaries.

4.3.3. Financial instruments

General description

The policy to support financially the energy renovation of apartment buildings starts with a pilot that began in 1996, which was fully funded by public money. This pilot was followed by the adoption in 2004 of the Housing Strategy for the Multi-Apartment Buildings Renovation Programme. On the financial side, this strategy combined commercial loans secured by a state-owned insurance agency with up to 50% in state grants (funded by the national budget).

The programme, based on a generous grant component, was stopped in 2008, as it ran out of public funding. With its accession to the EU in 2005, Lithuania gained access to cohesion funding. These funds made it possible to resume the programme of building renovation. The Jessica fund (Jessica I) in 2009 using cohesion funding was followed by Jessica II in 2015, and later by other funds with the same purpose (see table below). The Jessica funds are debt funds. They grant loans to selected banks, so that they can provide long term finance to building owners. The banks may propose to share risks. In addition, as the different Jessica funds are revolving, the funds can be reinvested in new loans; thus, ensuring the sustainability of the financing.

Name	Fund manager	Financial instrument	Aims at energy efficiency in	Size (EUR million) public + private	Achievements	Date of reporting the data
JESSICA II Fund of Funds	EIB	Loans	Multi-apartment buildings	150+70	783 signed loans (EUR 202 mil), renovation of 11,896 households	Early 2018
Leverage fund	EIB	Guarantees	Multi-apartment buildings	100+500		Early 2018
Multi-apartment Modernization Fund	VIPA	Loans	Multi-apartment buildings	74+293,5	802 signed loans (EUR 318 mil)	Early 2021
Energy Efficiency Fund	VIPA	Loans/Guarantees	Central Government buildings, street lighting	32	60 signed loans (EUR 19,51 mil) 3 guarantees issued (EUR 1.61 mil)	Early 2021
Municipality Owned Buildings Fund	VIPA	Loans	Municipal buildings	17.27+20	17 loans signed (EUR 4.61 mil)	Early 2021

Cultural Heritage Fund	VIPA	Loans	Cultural heritage	5.2	5 loans signed (EUR 2.44 mil)	Early 2021

Table 1: Funds financing the energy renovation of buildings in Lithuania since 2015 (Source: IKEMClimateFinanceWeek, op cit.).

Opportunities for social and affordable housing renovation

The soft loans provided by these funds consisted of fixed interest rates below private market rates and a two-year grace period during the construction phase, with minor self-financing and no requirement for a third-party guarantee or loan insurance.

Grant components included a 100% grant for the preparation of the renovation documents and a 15% interest subsidy via debt write-off if energy savings amounted to at least 20%, as well as an extra 25% write-off if energy savings reached a minimum of 40%. The scheme also included a 100% reimbursement for all renovations in apartments owned by low-income families[100].

The public financing of these funds has been gradually replaced by private financing (from €80 million of private funding out of €227 million in Jessica I to €400 million of private funding out of €500 million for the leveraged fund). In addition, local capacity to manage these funds has increased, as the most recent funds are managed by the National Promotional Institution Viesuju Investiciju Pletros Agentura (VIPA).

The main value added of these funds is to provide homeowners with very competitive funding to renovate their house. Before this programme, the access to financing was very limited or inexistent for this type of projects, expensive and with a short tenor. Currently, private banks are more confident to provide this type of financing and there are private initiatives to fund them, without public financing support. From the point of view of the apartment owners, the objective is that the savings on energy bills are higher than the annual payment of the loan. From the information available, this objective is met in most cases[101].

However, the development of the market for building renovations has not been straight forward. The government has been forced to change some regulations to facilitate its

[100] IKEMClimateFinanceWeek, Lessons learned from financing energy efficiency in multi-residential buildings in Lithuania National level II 2020

[101] From Innovative financing tolls tested in the framework of the JESSICA Holding Fund in Lithuania (https://www.covenantofmayors.eu/IMG/pdf/junona_bumelyte.pdf, last visited on 13 4 2019)

expansion, such as regulations related to the decisions to renovate by the owners of the apartments and the ones related to energy subsidies for low incomes[102].

Presently, these developments have evolved into the Multi-Apartment Renovation Fund, serving as a financial resource that extends loans to apartment owners under favourable conditions for building investments. The loan is offered at a fixed rate of 3%, with a repayment period of up to 20 years. Upon the conclusion of the renovation works, the state provides a 30% compensation for the energy efficiency investment. Homeowners in multi-apartment buildings collectively determine and have the option to borrow jointly for the project. This achievement is credited to the clearly defined roles allocated to municipalities, as well as private and municipal companies responsible for building maintenance.

In addition, to the incentives to renovate multi-apartment residential buildings, there are also financial incentives for the energy renovation of individual houses, such as replacing inefficient boilers with renewable energy sources or connecting them to the district heating system.

How to access

This programme has undergone significant evolution, positioning Lithuania as a noteworthy European exemplar, according to the European Court of Auditors (ECA) report. The country stands out as a model to emulate in the development of Financial Instruments for building energy renovations.

Some of the successes include the advantageous availability of loans, which are tied to the property rather than the owner. Therefore, if the house changes hands, the loan transfers to the new owner.

To access the developed financial instruments the National Promotional Institution, Viesuju Investiciju Pletros Agentura (VIPA) should be contacted.

[102] Intelligent Energy – Europe (IEE) Infinite Solutions 1st Training session JESSICA Holding Fund and soft loans for energy refurbishment of private housing Stuttgart, 24th -26th March 2014

4.3.4. Open credit lines

General description

Ministry of Environment of the Republic of Lithuania is the founder of Housing Energy Efficiency Agency (BETA). The activities are coordinated at the Agency has 10 branch offices in Lithuania. The main office is in capital city Vilnius, with different departments. In other areas there are responsible people providing consulting and doing all the technical work in the area.

BETA agency is responsible for the implementation of national programmes on energy efficiency projects. The Agency provides consulting services and assistance for homeowners on matters related to the renovation (modernization) of multi-apartment buildings. It also evaluates and approves submitted investment plans and procurement documents, cooperates with municipal authorities, engineering consultancy companies, educational institutions, nongovernmental organizations, etc.

The national agency BETA assumes a pivotal role in sponsoring building renovations by providing crucial guidance to interested apartment owners. Moreover, it actively promotes project standardization, streamlining processes for enhanced efficiency. The agency plays a key role in facilitating access to ongoing grants and has recently introduced an open credit line, further expanding avenues for support.

Opportunities for social and affordable housing renovation

From the perspective of social and housing providers in Lithuania, BETA introduced a novel model that marked a significant turning point in 2013, leading to a substantial increase in the number of renovation projects. Over the course of three years, more than 1500 projects have been successfully implemented. Noteworthy outcomes per renovation project include heat savings ranging from 50-60 percent and household cost savings of 10-15 percent.

Following the implementation of the new model in 2013, several enhancements were introduced:

- Standardization of the majority of documents.
- Facilitation of interim payments for ongoing projects.
- Establishment of an open credit line specifically designed to support various projects.

How to access

To access and learn more about the services offered by the BETA agency, it is advisable to directly contact them through their website (E-mail: info@betalt.lt).

4.3.5. National Energy and Climate Plan (NECP)

General description

Lithuania has formulated a National Energy and Climate Plan (NECP) for the 2021-2030 period, aligning with the EU Regulation on the Governance of the Energy Union (Regulation (EU) 2018/1999). Compliant with the Paris Agreement ratified by Lithuania, this plan outlines ambitious greenhouse gas (GHG) reduction targets of 43% for sectors covered by the EU Emissions Trading System (ETS) and 9% for non-ETS sectors by 2030, relative to 2005 levels.

In the NECP for 2021-2030, the industry, building, and transport sectors emerge as focal points for enhancing energy efficiency through cost-effective measures. The transport sector, for instance, is tasked with achieving a reduction of approximately 9% by 2030 compared to 2005. Given that buildings account for about 40% of primary energy consumption and represent a substantial source of GHG emissions, targeted measures are essential. Notably, the Lithuanian industry sector, constituting 19% of the final national energy consumption in 2017, underscores the importance of addressing energy efficiency within this sector.

Opportunities for social and affordable housing renovation

From the perspective of affordable and social housing, the overarching goal of this integrated project (IP) is to bolster the implementation of Lithuania's National Energy and Climate Plan (NECP). The project serves as a catalyst for the efficient execution of energy efficiency measures, the development of strategic capacities, and the integration of greenhouse gas (GHG) mitigation objectives. By addressing gaps and shortcomings that impede the NECP's effective implementation, LIFE IP EnerLIT presents a significant opportunity for the transport, building, and industry sectors to meet targets on energy efficiency and GHG emissions reductions.

Furthermore, LIFE IP EnerLIT contributes to the implementation of the EU's Energy Efficiency Directive and the Regulation on the Governance of the Energy Union, aligning with and supporting the broader goals of the European Green Deal.

In addition to the IP budget, the project facilitates the coordinated utilization of over €2.8 million in complementary funding from sources such as the Cohesion Fund, the European Regional Development Fund, REACT-EU, Horizon 2020, Lithuania's national Climate Change Programme, and the state budget.

Anticipated Results of the project include:

- National and Regional Capacity Building: Capacity building at both national and regional levels to achieve climate objectives, ensuring the comprehensive

implementation of Lithuania's NECP and the long-term sustainability of project outcomes.

- Sustainable and Efficient Buildings: Realization of sustainable and efficient buildings leading to climate change mitigation savings during the 2021-2030 period, including over 10 Terawatt hours (TWh) and almost 2.4 million tonnes of CO2 equivalent (CO2 eq.).
- Effective and Climate-Friendly Mobility: Promotion of effective and climate-friendly mobility, resulting in climate change mitigation savings during 2021-2030, including close to 11 TWh and 14.8 million tonnes of CO2 eq.
- Green and Energy-Saving Industry: Advancement of green and energy-saving practices in the industry, leading to climate change mitigation savings during 2021-2030, including more than 5 TWh and 1.5 million tonnes of CO2 eq.
- Green Public Procurement: Promotion of green public procurement, aiming for a 50% share by 2025 and 55% by 2030.

How to access

The National Energy and Climate Plan is not a direct source of funding; rather, it serves as a tool that will enable financing as it unfolds. Keeping track of its development and understanding where the funding is directed is of interest to entities and individuals looking to renovate their homes.

4.4. Financing for the renovation of affordable housing in Spain

4.4.1. Introduction: social and affordable housing in Spain

The social housing stock in Spain has historically been among the smallest of the EU, with a percentage average 6 points below the average of the member countries. On average, the social housing stock in Europe is around 9% of total housing, a percentage that is reduced to 2.5% in Spain, according to Eurostat and the Housing Europe Observatory.

In a more detailed analysis of the state of the housing stock, focusing on energy and accessibility aspects, the social housing stock in Spain is among those that most require energy rehabilitation in Europe, having more than 81% of the total buildings with letters E, F and G. Concerning accessibility, the study carried out by Mobility and Urban Agenda (MITMA) concluded that 75% of residential buildings for social housing are not accessible and that, of the total residential buildings that have 4 floors or more, about 40% do not have an elevator.

Public stimulus programmes affecting social housing focus on solving these two main issues: improving energy efficiency and accessibility, as well as increasing the social housing stock.

On the one hand, the programmes encourage direct aid for the creation of new social housing, and on the other, they stimulate the rehabilitation of housing to improve the current stock. These programmes have an environmental approach, which obliges the reducing greenhouse gas emissions, as well as favouring the improvement of universal accessibility in social housing.

The following points explain the main programmes for the promotion of the renovation of the social housing stock promoted by the Spanish State.

4.4.2. Subsidies programmes with the NextGeneration funds

General description

In the context of the Next Generation funds, the Spanish government has promoted a stimulus plan for the renovation of the housing stock. To this end, the recent regulatory framework establishes a direct collaboration with the Spanish autonomous communities, which must[103] promote stimulus programmes at the regional level, according to the bases of the law.

Endowed with more than €1 billion, the regulation defines 6 dedicated stimulus programmes for the housing stock, 5 of them stimulate building renovation and the 6th is focused on the creation of new social housing. Among the stimulus programmes, there has been put a special emphasis on neighbourhood reactivation programmes that allows them to be provided with sufficient funds to stimulate their retrofitting plans.

The NextGeneration EU funds aimed at addressing the crisis caused by the coronavirus, Spain is set to benefit from two key financial instruments. The first is the Recovery and Resilience Mechanism (RRM), with a total allocation of €672.5 billion, of which Spain will receive €140 billion between 2021 and 2026. Member states are required to submit National Recovery and Resilience Plans, outlining their strategies for utilizing these funds. Additionally, the REACT-EU initiative, designed to aid recovery and promote cohesion in European territories, allocates €47.5 billion.

As part of Spain's broader strategy, the Plan for Recovery, Transformation, and Resilience (PRTR), introduced on June 16, 2021, is structured in phases, with the first phase spanning from 2021 to 2023, and a budget of €70 billion. The PRTR encompasses 30 components, and one of its pivotal elements is Component 2: the Housing Rehabilitation and Urban Regeneration Plan, which has been allocated €6.82 billion to address the crucial aspects of housing rehabilitation and urban revitalization.

Opportunities for social and affordable housing renovation

The RD 853/2021 outlines various aid programmes aimed at fostering rehabilitation and energy efficiency improvement in the housing sector. Here are the programmes and their objectives:

1. Neighbourhood-Level Rehabilitation Actions programme: Objective: Promote rehabilitation initiatives at the neighbourhood level.
2. Support Programme for Rehabilitation Offices: Objective: Provide assistance to rehabilitation offices to enhance their capacity and efficiency.
3. Building-Level Rehabilitation Actions Programme: Objective: Support rehabilitation initiatives at the individual building level.

[103] https://www.boe.es/buscar/act.php?id=BOE-A-2021-16230

4. Energy Efficiency Improvement Actions Programme in Homes: Objective: Foster actions that enhance energy efficiency in residential properties.
5. Programme to Assist in Developing Existing Building Records for Rehabilitation and Drafting Rehabilitation Projects: Objective: Provide support for creating existing building records and drafting rehabilitation projects.
6. Programme to Aid in Constructing Social Rental Housing in Energy-Efficient Buildings: Objective: Support the construction of socially rented housing in energy-efficient buildings.

The overarching goal of these initiatives is to achieve a minimum energy saving of 30% in non-renewable primary energy consumption. The decree establishes a comprehensive framework to encourage and facilitate energy-efficient practices and rehabilitation efforts at various levels within the housing sector.

The objectives of the assistance in Programmes 3 and 4 are geared towards the rehabilitation of social and affordable housing:

- Financing of works or actions in buildings primarily used for residential purposes, aiming for a proven improvement in energy efficiency, with special emphasis on the building envelope.
- Granting subsidies through a competitive process where the sole criterion for awarding the subsidy is the strict order of submission of applications.

There are two levels of intervention: building and housing. Eligible costs include the expenses related to the works, management, professional fees, project drafting, necessary technical reports and certificates, and administrative processing costs. However, costs such as licenses, fees, taxes, or tributes are not considered eligible, except for VAT, which may be considered eligible if not recoverable or compensable in part.

Eligible recipients for building rehabilitation include individuals (private or public entities) with ownership or usufruct of homes, public administrations, entities, public enterprises, publicly majority-owned companies, property communities, associations, collective property owners, cooperative housing societies, and leaseholders or concessionaires of buildings.

The building requirements entail a predominant residential use of 70%, necessitate a community agreement through a simple majority, and mandate the appointment of a manager or agent. Additionally, there is a stipulation for a minimum 30% reduction in non-renewable primary energy consumption, referencing the energy certification. In climatic zones C, D, and E, an extra requirement is imposed: a minimum annual global reduction in heating and cooling energy demand for single-family homes or buildings, with a 25% reduction in zone C and a 35% reduction in zones D and E.

For housing rehabilitation, eligible recipients encompass individuals (private or public entities) with ownership, usufruct, or lease of homes, as well as public administrations, entities, public enterprises, and companies' majority-owned by public administrations that own the properties.

Housing requirements include the need for the residence to be the habitual and permanent domicile. For housing interventions, actions must be taken to achieve a minimum 7% reduction in the overall annual energy demand for heating and cooling or a reduction of at least 30% in the consumption of non-renewable primary energy.

According to the achieved energy savings in the intervention, there are maximum subsidy percentages on the intervention cost, ranging from 40% to 65% and up to 80%. The maximum amount per dwelling is €6,300 for the first case, €11,600 for the second, and €18,800 for the third. Additionally, there are personal assistance grants for individuals facing economic vulnerability, with amounts ranging from €15,700 to €26,750 depending on whether it is a multi-family building or a single dwelling.

How to access

The financial assistance is implemented at the autonomous community level. As such, each community has devised its procedures for accessing the grants, along with the required documentation and application forms. Different institutions have also been designated for collecting and validating the applications.

4.4.3. Line of guarantees for residential building renovation

General description

The Official Credit Institute (ICO), through direct collaboration with the Ministry of Transport, MITMA, has developed the **'Line of Guarantees Residential Building Rehabilitation'**[104] with the aim of collaborating in the promotion of housing rehabilitation. It allows a new line of guarantees for an amount of up to €1 billion to partially cover the risk of loans for residential building rehabilitation. Specifically, the state will guarantee up to 50% of the loans offered by financial institutions for these actions, allowing to mobilize a total of €2 billion.

The new guarantee line serves as an additional instrument to boost rehabilitation activities in Spain, complementing existing aid programme, tax deductions, and recent regulatory improvements initiated by the government. As part of the Recovery Plan, there is a €3.42 billion investment earmarked for residential rehabilitation until 2026. These guarantees are specifically for recipients of subsidies under the Recovery Plan, meaning only those receiving funds from the European programme NextGenerationEU for rehabilitation projects can apply for them.

Opportunities for social and affordable housing renovation

Clients can request a maximum loan of €30,000 per dwelling, with a repayment period of up to 15 years and the option for early repayment without fees.

Eligible applicants include property owners or property communities undertaking energy-efficient rehabilitation in residential buildings, having received grants from the Autonomous Community or the City of Ceuta and Melilla where the building is located, through the "Neighbourhood Rehabilitation Program" or the "Building-Level Rehabilitation Program" of the PRTR.

The guarantees incur no costs for financial institutions or property owners. This new guarantee initiative is a crucial component of a broader set of measures aimed at fulfilling Spain's commitment to promoting building rehabilitation in the housing sector. These actions aim to enhance living standards, ensure building quality, and bolster a key sector of the Spanish economy, contributing significantly to economic activity and employment growth in the coming years.

How to access

The guarantee will be provided by institutions participating in the ICO guarantee programme.

[104] https://www.ico.es/newsletter-ico-octubre-2022/mitma-nueva-l%C3%ADnea-de-avales-de-1.100-millones-para-impulsar-la-rehabilitaci%C3%B3n-de-edificios-residenciales

To apply for the ICO guarantee lines for energy-efficient rehabilitation, interested parties can directly request these guarantees through the banking or financial institution from which they obtain the loan. The ICO's website provides information on where to apply for these guarantees.

4.4.4. PREE programme

General description

To support the promotion of energy efficiency renovation and the reduction of final energy consumption and, with it, GHG emissions, the Government of Spain, through the Institute for Energy Diversification and Saving (IDAE), has developed the PREE Program[105] endowed with a package of grants aimed at financing renovation of the housing stock, which are managed in collaboration with the regional governments.

With an allocation of more than €400 million, the PREE Program grants renovation projects ranging from changes in the thermal envelope of the building to the replacement of thermal installations based on fossil fuels by thermal generation based on renewable sources, with the objective of a minimum reduction of 30% of primary energy consumption from non-renewable sources.

A fundamental and noteworthy aspect of the PREE Program is its social scope, since special attention is given to retrofitting actions in spaces that affect vulnerable groups, which in turn are the most affected by energy poverty. An additional grant is awarded for actions carried out in residential buildings whose owners have got the social bonus. And in those municipalities with less than 5000 inhabitants, the PREE-5000 Program, which have independent budget items of €92 million[106].

Opportunities for social and affordable housing renovation

Potential beneficiaries of the programme include private or public individuals or entities who own existing buildings for any purpose. This encompasses property owners, residential community associations, and groups of owners meeting specific requirements. Additionally, it extends to businesses operating, leasing, or holding concessions for buildings, as well as energy service companies and providers. Local entities, public administrations, renewable energy communities, citizen energy communities, municipalities, provincial councils, or equivalent local entities, as well as municipal associations or groups in Spain, are also eligible recipients. This programme represents a significant opportunity for the enhancement of social and affordable housing.

The eligible interventions encompass three main types:

- Enhancement of thermal envelope.

[105] https://www.idae.es/ayudas-y-financiacion/para-la-rehabilitacion-de-edificios/convocatorias-cerradas/programa-pree

[106] https://www.idae.es/ayudas-y-financiacion/para-la-rehabilitacion-de-edificios/programa-pree-5000-rehabilitacion

- Improvement of the energy efficiency of thermal facilities, including: Replacement of conventional energy with solar thermal energy. Substitution of conventional energy with geothermal energy. Replacement of conventional energy with biomass in thermal installations. Enhancement of energy efficiency in subsystems of generation not mentioned above, such as heat pumps. Improvement of energy efficiency in subsystems of distribution, regulation, control, and emission of thermal installations.
- Enhancement of lighting installations.

The amount of the base grants under the PREE Program for interventions in entire buildings will be 35% of the eligible cost for all types of actions, except for improvements in energy efficiency in lighting installations, where the aid will be 15%. If the choice is to focus on rehabilitation within individual dwellings or premises within buildings, these percentages will be 25% and 15%, respectively. Additional assistance may be available based on the building's use, and meeting energy efficiency, social, or integrated action criteria may qualify for different supplementary grants.

How to access

The PREE programme undergoes periodic updates as funds are replenished, with potential variations from one call to another. Accessing the grants involves forming alliances with different autonomous communities that facilitate the application process. For additional information, individuals or entities can directly contact the Institute for Diversification and Saving of Energy (IDAE). Any inquiries or clarifications can be directed to the Citizen Information Service on Energy Efficiency and Renewable Energies (SICER) through various channels, including the contact form or via email at ciudadano@idae.es.

4.4.5. Incentive programme

Description

This **Incentive Program** aims to promote self-consumption and distributed generation, demand management, storage and flexibility, the promotion of local energy communities and the incorporation of renewable energies, with the objective by 2030 to have 42% of all energy used coming from renewable energies.

This programme is regulated by Law RD 477/2021, which gives direct concession to the autonomous communities to manage these Incentive Programs, which will give them access to €660 million, that can be increased to €1.3 billion.

The regulatory bases of this programme establish that these aids are not compatible with other aid programmes that come from European funds.

Opportunities for social and affordable housing renovation

To advance the adoption of renewable energies, both thermal and electrical, and enhance consumption control, the Royal Decree 477/2021, establishes the regulatory framework for directly granting subsidies to autonomous communities and cities of Ceuta and Melilla. The initiative aims to drive industry growth and support businesses associated with renewable energy technologies. The decree also approves six incentive programmes for self-consumption, storage, and thermal uses of renewable energies.

How to access

The Ministry for Ecological Transition and the Demographic Challenge, through the IDAE, will coordinate and monitor the grants managed by the Autonomous Communities and Cities, the direct beneficiaries of these subsidies.

The assistance applications may be submitted according to the timelines and procedures defined by the Autonomous Communities and Cities in their respective calls.

4.4.6. Tax incentives

General description

The Recovery Plan, which channels European funds, allocates a significant portion of €6.82 billion to the housing sector, placing particular emphasis on interventions aimed at enhancing energy efficiency. Recognizing the urgency, the government, with the approval of the EU, has devised a package of grants and **tax incentives** designed to encourage taxpayers to undertake these improvements. In this regard, Tax deductions can go up to a maximum of 60%. These direct aids are exempt from income tax (IRPF).

The plan establishes three types of deductions and aids, two intended for individual homes, and another specifically designed for interventions in entire residential buildings.

Opportunities for social and affordable housing renovation

The Government of Spain has introduced tax deductions for energy-efficient housing renovation works, encompassing two crucial aspects. These measures are particularly significant for social and affordable housing in Spain, allowing them to undertake energy-efficient renovations with enhanced benefits:

1. The aid granted through different public aid programmes, including those at the national and regional levels, will not be integrated into the income tax base.
2. The rehabilitation actions in homes that entail an improvement in the energy efficiency of the same, will have a tax deduction according to the following criterion:
    a. **Deduction of 20%** for actions that reduce by at least 7% the demand for heating and cooling of habitual residence, up to a maximum of €5,000 per home.
    b. **Deduction of 40%** for actions that reduce by 30% the consumption of non-renewable primary energy in homes, or that reach the energy rating of the letters "A" or "B", up to a maximum of €7,500 per home.
    c. **Deduction of 60%** for actions that reduce by 30% the consumption of non-renewable primary energy in residential buildings, or that reach in their energy classification the letters "A" or "B", up to a ceiling of €15,000 per home.

Public aids for renovations are currently tax-exempt, a groundbreaking move by the legislature to encourage rehabilitation. If opting for reforms without applying for the subsidy, the entire investment can still be deducted in the tax declaration. In addition, VAT reduction eligibility requires the main objective of the works to be building construction, with costs exceeding 25% of the acquisition price.

How to access

The Superior Council of Architects of Spain and the General Council of Economists of Spain have developed a guide on tax deductions for the rehabilitation of homes and residential

buildings. The guide details the fiscal benefits and their alignment with the main taxes affecting rehabilitation activities: VAT and income tax (IRPF). The document's aim is to make the general public aware of the potential benefits and recent tax updates, as well as to assist in accessing them. The guide is available in Spanish[107] and can be downloaded here.

107 https://economistas.es/Contenido/Consejo/Estudios%20y%20trabajos/Actualizaci%C3%B3n%20Gu%C3%ADa%20sobre%20desgravaciones%20fiscales%20rehabilitaci%C3%B3n%20viviendas%20y%20edificios%20residenciales%20mediante%20fondos%20Next%20Generation.pdf

4.4.7. Credits for communities of owners

Description

The Government of Spain, in order to strengthen access to credit to Homeowners Associations for renovation works and improvements of buildings, has modified the Law of Land and Urban Rehabilitation[108], so that Homeowners Associations have full legal capacity for the formalization of credits. In this case, the decision at the meeting is approved by a simple majority of owners, thus facilitating access to finance.

Furthermore, the Next Generation Funds have also spurred the creation of financial products by banking entities aimed at property communities. This represents an opportunity to subsidize projects for improvements ranging from rehabilitation, accessibility, energy efficiency enhancement, to digitization.

Opportunities for social and affordable housing renovation

Thanks to the combination of incentives for energy-efficient rehabilitation of multi-family homes and legislative changes, various commercial banks are extending their products to neighbourhood communities, encouraging them to opt for their loans with advantageous terms. These proposals include repayment periods spanning 10 to 12 years and loans covering 100% of the project cost, up to €300,000.

This represents a significant opportunity for multi-family buildings with diverse owners and varying incomes, as it prevents special assessments and allows for a gradual payment schedule through monthly instalments. This is facilitated by the energy savings achieved through the completed rehabilitation works.

How to access

To access these loans, it is necessary to first reach an agreement at the community level and collectively decide on the implementation of energy renovation. With legal modifications allowing for a simple majority, the project can be carried out. In this regard, the type of intervention must be specified to estimate the project cost for requesting the community loan. It is crucial to engage professionals during the decision-making, planning, and execution phases of the works. Once the project and cost are clear, one should approach commercial banks offering community credit lines and choose the most suitable one. As these are financial products, each institution provides specific advantages and conditions.

[108] https://www.boe.es/buscar/doc.php?id=BOE-A-2022-9838

5. Private financing for social and affordable housing renovations

5.1. Preliminary considerations

Promoting the energy efficiency of both public and private buildings was emphasized in the European Green Deal as a pivotal measure to advance sustainability in the sector and achieve its goals. This underscores the substantial investments needed for renovating existing buildings in Europe. Their objectives entail an additional investment of €90 billion annually in building renovation until 2050. For the residential sector, this necessitates doubling the current rate of renovation while significantly increasing the proportion of performing and low-energy renovations.

This situation is particularly critical in the social and affordable housing sector; specifically, for social housing, including cooperative and public housing, which represents about 11% of the total building stock in the European Union. With nearly 34 million Europeans unable to afford adequate heating in their homes, addressing energy poverty is an urgent task for the EU and its Member States. Annually, 800,000 social homes require renovation, requiring an estimated additional funding of €57 billion per year[109].

These amounts cannot be covered solely by public funds; therefore, private finance is necessary. Public financing, however, must be complemented by private finance, and the Renovation Wave proposes improving the enabling conditions to facilitate this. The strategy aims to implement measures to de-risk energy efficiency investment. Particularly, when it comes to social and affordable housing renovations, attracting private capital becomes even more challenging due to projects being less profitable for financial intermediaries and private investors.

Chapter 3 explains the EU Funding Landscape to support energy-efficiency renovation projects for social and affordable housing and how different measures have been implemented to encourage the attraction of private financing. This chapter delineates the private financial resources that can be employed by social and affordable housing promoters in the energy renovation of their homes, indicating which profiles are most suitable for each: individual homeowners, public administration and entities, social housing associations and cooperatives, or private entities acting as intermediaries in these renovations. It also addresses the size of projects that can be considered for each of them, such as individual dwellings, buildings, or district-level.

These financial resources are mainly categorized into **debt and equity**. Additionally, this chapter incorporates a section on alternatives to attract more private financing, such as

[109] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0662

Management Solutions like entering into Energy Performance Contracting (EPC) agreements with Energy Service Companies (ESCOs), or different **project integration mechanisms,** like Project Bundling, and financial scheme integrations such as Blended Finance. It also explores various alternatives such as on-bill and on-tax financing, Project Finance, and the creation of Special Purpose Vehicles (SPVs).

Benefits and opportunities

Combining public and private funding may reduce financing costs of private financing. Public financial instruments, such as grants, subsidies and guarantees may allow social and affordable housing promoters to access competitive funding and de-risking investments in building renovation.

By integrating private investment in the financial planning of a project, promoters **lower their risk** of relying on public grants, which can be in limited supply, notably grants. Furthermore, private finance can help to cover higher costs that could not be covered with grants, thus facilitating a more comprehensive renovation of dwellings and buildings.

International and EU policies and regulations promote the application of stricter Environmental, Social and Governance (ESG) criteria. The EU action plan for sustainable growth is the main EU policy document and one of the important documents of this action plan is the EU Taxonomy[110]. These policies encourage financial institutions such as large asset managers, institutional investors, insurance companies and pension funds operating in the EU to develop their green investments. In this respect, it is noted that many banks have developed **green financial products** that can finance energy renovations in buildings, among other sustainable investments. Major renovations that are in line with the Energy Performance of Buildings Directive (EPBD) are eligible for the EU taxonomy, as well as any Energy Efficiency project that reduces primary energy consumption by more than 30%. Individual measures to improve the energy performance of a building are also eligible if they comply with the technical criteria defined in national legislation[111].

Investors may align their investments with the EU Taxonomy to showcase effective contributions to EU climate objectives. Energy renovation of existing buildings can achieve Taxonomy alignment by significantly contributing to environmental goals, meeting performance criteria, complying with legislation, demonstrating good governance, and addressing environmental and social risks. This presents a significant opportunity for social and affordable housing, as private investments in the field are expected to continue growing in the coming years.

[110] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

[111] https://www.larevuedelenergie.com/les-investissements-pour-la-renovation-energetique-des-batiments-en-europe/

Renovation projects in the realm of social housing present significant potential for mobilizing investments sourced from individuals' savings. Mechanisms such as crowdfunding and community funding, elaborated upon extensively in this section, can prove to be highly effective in this regard. Research in this context has convincingly demonstrated that individuals and communities, who may not typically engage in financial investments, exhibit a greater inclination to participate in projects that align with their social values and causes.

Barriers to private financing

The primary challenges in mobilizing substantial private finance for housing renovations encompass the need to create financing **options appealing to both private and public promoters**, alongside financial institutions' efforts to mitigate real or **perceived risks** in building renovation investments. These challenges are particularly pronounced when the promoters include low-income families, social housing associations, or public administrations focusing on social and affordable housing programmes. Additionally, it is necessary to analyse the nature of the promoters and their location; for example, the perception of risk varies among investors in different member states. In Germany, non-profit social housing associations are generally considered safe investments, while in other member states, they may be viewed as a type of risky proposition.

The main barriers to mobilising large amounts of private finance are intertwined with public policy capacity to promote building renovations, notably through **regulations**. Moreover, when considering private financing options, it is to be noted that normally they tend to be more expensive than public ones. An important distinction is between **public and privately owned dwellings**; the renovation of public dwellings often involves the refurbishment of entire social buildings or even at the district level, necessitating larger financing. In contrast, private affordable dwellings imply that their owners will seek more specific and smaller-scale financial solutions. The financial situations and investment sizes significantly differ for these two types of promoters.

The suitability of **district-level** housing renovation projects, whether public or private, for private investors is contingent on a long-term investment strategy due to their **high upfront costs** and often **lengthy returns on investment**. This observation is based on the understanding that such projects typically require extended periods to recoup initial expenses. This underscores the importance of aligning investor strategies with the unique financial dynamics of district-level housing renovation initiatives.

Despite the difficulties, it is essential to point out that both the European Commission and the Member States have focused their latest policies and regulations on boosting energy efficiency with a view to a net-zero economy by 2050. Therefore, continuous changes, corrections to avoid these issues and new considerations that may be positive for their promoters and that affect private actors, especially banks, are expected.

5.2. Private financing instruments

5.2.1. Debt financing

Debt financing involves obtaining capital for a project or business through borrowing, where the borrower commits to repaying the principal amount along with interest over a specified period.

In the context of social and affordable housing, this section outlines commonly used debt financing instruments by various promoters. It also explores less frequently employed instruments that might present opportunities for these promoters.

5.2.1.1. Preferential/soft loans

General description

Preferential loans (also known as soft loans) generally refer to loans offered at terms more favourable than standard market rates. These terms can include lower or zero interest rates, longer repayment periods, or other favourable conditions such as grace periods.

These loans are often provided by governments, international organizations, or financial institutions to support specific sectors or industries, and are often used to support economic development, particularly in regions or sectors facing challenges. They can be used to promote economic activities, such as small business development, social and affordable housing renovations, infrastructure projects, or other targeted initiatives.

These loans involve public funding in one way or another. Governments subsidise financing to make them more attractive for certain investments such as energy efficiency measures. Public incentives like guarantees and public loans are ways to subsidise these loans[112].

Opportunities for social and affordable housing renovation

Promoters of energy-efficient renovations in social and affordable housing can find diverse opportunities in preferential and soft loans beyond favourable financial conditions. These programmes often provide technical advice, foster collaborations, and facilitate access to networks within the sustainable energy sector. Additionally, promoters may benefit from recognition and certifications, flexible collateral requirements, and the potential for additional grants linked to broader governmental initiatives. Soft loans can also offer opportunities for skill development, participation in pilot programmes, and access to complementary training

[112] Technical Guidance: Financing the energy renovation of buildings with Cohesion Policy Funding. From https://op.europa.eu/en/publication-detail/-/publication/4ef2fc24-67d0-45c2-a6d1-c677574e6d26/language-en/format-PDF/source-251171406

initiatives. These holistic opportunities enhance the viability and impact of energy-efficient projects in the affordable housing sector.

The **Estonian KreDex Fund** (See Box 19) is an example of a provision of favourable debt financing to commercial banks using public funding.

Box 19: Estonian Business and Innovation Agency (KredEx fund)[113]

Offering a solution to a range of promoters, KreDex **provides soft loans**, **loan guarantees** and **grants to homeowners**. An energy audit is mandatory to access KredEx funding. The fund targets energy efficiency investments that have been defined as priority measures in an energy audit. The **objective** is to reach a minimum 20-30% savings in the building's energy consumption.

KredEx also provides **favourable funding to commercial banks** that extend loans to apartment associations and take the risk of lenders. The financial product developed targets apartment buildings; measures need to save at least 20% of energy in buildings up to 2000 m2 and at least 30% in buildings above this size. Multi-apartment buildings should have at least 3 apartments and apartment associations or a community of apartment owners. Most importantly, the loan is provided against cash flow, requiring no further collateral.

KredEx also offers **mezzanine financing**, also known as subordinated loans. Those loans are repaid after senior loans, thus exposing itself to a high risk of default. While subordinated loans are very mature and widely used financial instruments in general, they are only used in spare quantities for energy efficiency in specific building segments (if at all). As markets mature, subordinated loans have a potential role in replacing grants in markets where the cash flows from energy efficiency investments do not require high amounts of public grants.

How to access

Promoters of energy-efficient renovations in social and affordable housing, including homeowners, social housing associations, public authorities, and private companies, must fulfil various criteria to access preferential and soft loans.

Common requirements involve aligning projects with clear energy efficiency goals, demonstrating technical and financial viability through feasibility studies, and showcasing

113 https://www.kredex.ee/en/teenused/ku-ja-kov/laen-kaendus-ja-toetus

positive social and environmental impacts. Compliance with local regulations, community engagement, and adherence to sustainability standards are often emphasized.

Additionally, promoters may be expected to possess relevant experience, organizational capacity, and a commitment to transparency. Collaboration with community stakeholders and participation in industry networks are often valued. The ability to outline comprehensive management and monitoring plans, coupled with a transparent financial track record, contributes to meeting the eligibility criteria set by financial institutions and loan programmes.

The specific requirements can vary, and promoters should thoroughly review the criteria established by each lending programmes they approach.

5.2.1.2. Energy Efficiency mortgages/ Green mortgages

General description

Energy efficiency mortgages (EEM), also known as green mortgages, are loans intended to finance the purchase, construction, or renovation of buildings where energy performance meets a high energy efficiency certificate or where planned works will significantly reduce the energy consumption of the building. Since the EEM loan is a mortgage, the collateral is the asset itself. Failure to pay back the debt could result in the seizure of the asset, as it is a mortgage on the dwelling.

Opportunities for social and affordable housing renovation

Since it is expected that EEM should have a lower default risk than regular consumer loans, banks may be willing to offer preferential rates and conditions to homeowners for this type of lending. Energy efficiency renovation works impact in diverse ways both the borrowers and the buildings' risk profiles.[114] For example, savings from lower energy bills normally improve borrowers' cash flow, thus improving their capacity to repay the loans. Along the same line, energy efficiency renovations may enhance the building's value as well as reduce the risk for lenders. This is an opportunity for borrowers to select personalised conditions with preferential conditions addressing their financial priorities. Preferential terms can include longer repayment terms, preferential rates, free early repayment, and an extended grace period.

EEM offers a big opportunity to unlock financing for renovation from the private sector as they bring mortgage banks and traditional lending institutions into the green building market. EEM loans are a great financial mechanism when the project promoter is not the owner of the building(s) and the perceived creditworthiness of the project promoter is lower than the

114 https://cordis.europa.eu/project/id/746205

property owners. For example, EEM can play a decisive role in projects where promoters are citizens or community organisations with limited financial capabilities.

Since the definition of a green mortgage is large, as different lenders are offering dwelling owners different options, the Energy-Efficiency Mortgage Institute (EEMI) works to standardise and categorise those loans. They created the EEM Label (EEML) to help consumers, lenders and investors identify EEM in lending institutions' portfolios. The label guarantees the implementation of market and legislative best practices at European and international levels.

As the EEM market develops, lending institutions are called to improve their capabilities in the green mortgage sectors. The disclosure of green mortgage data and the implementation of the EU Taxonomy will further enhance the confidence of lending institutions in these products. There is still room for improvement. Ex-ante assessments of energy-efficiency works are not easily available to dwelling owners and financial institutions. Those assessments will further enhance the confidence of financial institutions, letting them offer better loan conditions. However, nowadays green mortgages have had difficulties in scaling.

Box 20 shows an example from Romania, where the authorities developed a market for green mortgages by also creating their own label.

Box 20: Romania Green Building Council

The **Romanian Green Building Council** is working with a consortium of banks and developers to develop the market for **green mortgages**. This initiative can certify green residential projects that are environmentally responsible and energy efficient relative to the standard offered in Romania. A study of 71,000+ homes has shown that mortgages with a Green Homes certification have a 32% reduction in default risk compared to regular mortgages.

Through the issuance of green mortgages tied to certified Green Homes, financial institutions reduce their mortgage default risk and can, therefore, offer a lower cost of financing. Lower finance costs combined with energy savings have a significant impact on the project cash flow[115].

How to access

Promoters of district-level intervention in the social and affordable sector should keep in mind that the low creditworthiness of some homeowners can limit their accessibility to EEM loans. Green mortgages can only be offered directly by financial institutions to homeowners.

[115] rogbc.org/en/projects/green-homes.

The key credit characteristics for accessing these mortgages often include a stable financial profile, evidence of the proposed energy-efficient renovations, and a commitment to sustainability. While individual lenders may have specific criteria, the overarching aim is to encourage and financially support initiatives that contribute to energy efficiency and environmental sustainability in the housing sector. Prospective applicants should check with lenders for precise details on eligibility and credit requirements.

5.2.1.3. Bonds

General description

A bond is a debt instrument under which the issuers take a debt towards the holder. The issuer must repay the amount borrowed (principal) and the interest (coupon) at the specified time (maturity date). The rate of return received from investing in a bond is called the yield. Bonds usually mobilise large amounts of financing, in the hundreds of millions of euros, highlighting their usefulness for financing large-scale projects or many different projects. Classic bond issuers include municipal governments, national governments, international institutions and private corporations. The focus here is on impact bonds. There are four main types of impact bonds on the market[116]:

1. **Standard use of proceeds bond**: a standard recourse-to-the-issuer debt obligation. For example, the district-level project promoters issue a bond to finance energy-efficiency works and PV installation on social housing buildings. The repayment coupon is pre-determined and not related to the performance of the project.
2. **Revenue bond**: a non-recourse-to-the-issuer debt obligation in which the credit exposure in the bond is to the pledged cash flows of the revenue streams. For example, repayment of the bond is guaranteed by the revenue stream from the selling of energy savings and additional revenues through the PV installation.
3. **Project bond**: a project bond where the investor has direct exposure. For example, the principal of the bond is paid directly off revenue generated by selling PV energy generation.
4. **Securitized bond**: a bond collateralized by one or more specific projects. Repayment of the bonds is guaranteed by another financial instrument from the issuers themselves.

Opportunities for social and affordable housing renovation

Bonds issued by municipalities, municipal bonds, are a low-risk and low-return option for investors. It is a way for local government to access financing. Municipal bond emissions have

[116] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/

been used by local governments to fund energy efficiency projects. Repayment of the bonds is done by the entity issuing the bond. In the case of energy efficiency projects, part or the totality of the repayments may be covered by the savings in energy bills. Local legislative framework limits their usage across local European governments. Municipal bonds may or may not tie to a defined project. Since the default risk of large municipal governments is generally low, they can offer a low coupon, hence reducing their cost of borrowing. When acting as promoters, local government can for example use these funds as part of a blending strategy (this point is covered in detail in section D of this chapter).

Bonds used to finance energy-efficiency projects can be described as green, social or sustainable if they are aligned with the criteria of the relevant legislation (the Taxonomy in the case of the EU). Those bonds are specially designed to attract investors looking for ESG-compliant investments for their portfolios (ELTI, s.d.), thus generating more value for investors.[117] The portion of ESG bonds linked to affordable housing, energy efficiency, and the circular economy is still relatively limited compared to those addressing general greenhouse gas emissions reduction. District-level social housing renovation could fall into those categories depending on the project scope.

The following table shows their proportional share in the Europe ESG market. Project bundling with different social infrastructure investments could help attract investors to affordable housing bonds.

Bond Sample Jan 2021 – Jun 2022[118]	151
GHG emissions	84%
Water consumption	7%
Energy efficiency	7%
Renewables	7%
Circular economy	7%

[117] Boosting Investment in Social Infrastructure in Europe. From https://economy-finance.ec.europa.eu/publications/boosting-investment-social-infrastructure-europe_en

[118] Bloomberg, Scope Ratings. From https://www.scopegroup.com/dam/jcr:0bb72f83-8fe6-446b-9ae0-bc2030c255d9/Scope%20Ratings_ESG-linked%20bonds_1H%202022_reseach_July2022_FINAL.pdf

Sustainable farming/food	4%
Transport	2%
Labour	3%
Gender equality	1%
Biodiversity	1%
Education	1%
Sustainable sourcing	1%
ESG score	3%
Affordable housing	1%
Other	16%

How to access

The emission of bonds is a costly process. Promoters of social and affordable housing should consider if the required resources to issue a bond are available or if funds from existing bonds issued by specific public authorities might be used to finance their project. An organisation can finance projects through bond emissions if the local regulatory framework permits it.

The **green, social, and sustainable bonds principles** are guidelines for the bond issuance process, which recommend transparency, promote integrity and provide a framework that defines impacts and guarantees the relevance of proceeds. The respect of the guiding principles is a key element to be followed to make sure bonds have a clear structure to guarantee that projects being financed, comply and are able to ensure the expected impact.

To be aligned with the mentioned principles, the bonds need to be structured in alignment with the following four components:

1. **Use of proceeds**: What defines the uses of the bond? Where bond proceeds are being invested, and how relevant are the projects?
2. **Project evaluation and selection process**: The issuer of a bond has to inform investors about the objectives, the selection process used to determine how the projects fit into the eligible project categories and finally the related eligibility criteria.
3. **Management of proceeds**: The net proceeds of the bond, or an equivalent amount, should be credited to a sub-account, moved to a sub-portfolio or otherwise appropriately tracked by the issuer.
4. **Reporting**: Issuers should collect, keep, and update information on the use of proceeds. It has to be renewed annually until full allocation. A list of the projects to which bond proceeds have been allocated, a brief description of the projects, the amounts allocated, and their expected impact should be provided[119].

Green bonds are a financial instrument in which the funds are exclusively applied to projects that promote climate or other environmental objectives. Box 21 explains the sophisticated process of developing green bonds.

Box 21: Green bonds

1. Use of proceeds:

Utilization of the proceeds of the bond for eligible Green Projects, which should be appropriately described in the legal documentation of the security. All designated eligible Green Projects should provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer.

The following list of project categories, while indicative, captures the most used types of supported projects, or expected to be supported by the green bond market:

a. Green buildings that meet certifications for environmental performance.
b. Circular economy products, technologies and processes and/or certified eco-efficient products.
c. Biodiversity conservation.
d. Clean transportation vehicles and/or infrastructure.
e. Sustainable water and wastewater management.
f. Infrastructure solutions for climate change adaptation.
g. Renewable energy.

[119] Boosting Investment in Social Infrastructure in Europe. From https://economy-finance.ec.europa.eu/publications/boosting-investment-social-infrastructure-europe_en

h. Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products).
i. Pollution prevention and control.
j. Environmentally sustainable management of natural resources and land use.

2. Project evaluation and selection process:

The issuer of a Green Bond should clearly communicate to investors:

- The environmental sustainability objectives of the eligible Green Projects;
- the process by which the issuer determines how the projects fit within the eligible Green Projects categories; and
- complementary information on processes by which the issuer identifies and manages perceived social and environmental risks associated with the relevant projects.

Issuers are also encouraged to:

- Position the information communicated above within the context of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability.
- Provide information, if relevant, on the alignment of projects with official or market-based taxonomies, related eligibility criteria, including if applicable, exclusion criteria; and also disclose any green standards or certifications referenced in project selection.
- Have a process in place to identify mitigants to known material risks of negative social and/or environmental impacts from the relevant projects.

3. Management of proceeds:

The net proceeds of the Green Bond, or an amount equal to these net proceeds, should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner, and attested to by the issuer in a formal internal process linked to the issuer's lending and investment operations for eligible Green Projects.

4. Reporting:

Issuers should make, and keep, readily available up-to-date information on the use of proceeds until full allocation. The annual report should include a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects, the amounts allocated, and their expected impact.

The GBP recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures and disclosure of the key underlying methodology

and/or assumptions used in the quantitative determination. Issuers should refer to and adopt, where possible, the guidance and impact reporting templates.

Social impact bonds are any type of bond instrument directly aimed at mitigating a specific social issue and/or seeking to achieve positive social outcomes for a target population. A social issue threatens, limits, or reduces the well-being of a specific target population. Individuals who purchase social impact bonds are motivated by a dual interest in financial returns and positive social outcomes. These investors seek to earn a financial return on their investment while supporting initiatives that address social challenges. Social impact bonds, also known as **pay-for-success bonds**, tie financial returns to the success of social programmes. Investors are incentivized to invest in projects that demonstrate measurable and positive social impact, providing a unique avenue for aligning financial goals with a commitment to social betterment.

Last, **sustainability bonds** have a hybrid set of objectives that combine **green and social** issues, the perfect combination for the energy renovation of social and affordable housing. Box 22 presented the ABZ Sustainability Bonds guideline for the presentation of the issuances of bonds from ABZ, the largest housing cooperative in Switzerland[120].

Box 22: ABZ Sustainability bond

1. Use of Proceeds:

The net proceeds of the Sustainability Bond issued by ABZ will be used exclusively for the financing and refinancing of the construction or ownership of ABZ housing cooperative properties in Switzerland that are environmentally friendly. This will enable the construction of more than 700 non-profit apartments in the Zurich area to be financed in part or in full.

2. Process for Project Evaluation and Selection:

The sustainable bond of ABZ complies with the **Social Bond Principles, Green Bond Principles, and the Sustainable Bond Guidelines** of the International Capital Market Association (ICMA).

The buildings financed must meet the following criteria:

- Part of the ABZ residential building park.
- Compliance with specified energy standards and environmental guidelines.
- Use of renewable energy sources.
- Switzerland as a business location.

[120] https://www.anz.com/content/dam/anzcom/debtinvestors/anz-sdg-bond-opinion-update-final.pdf

3. Management of Proceeds:

If a portion of the issue proceeds cannot be allocated to financing in accordance with the criteria defined in this framework, the corresponding amount will be held in cash for a maximum period of six months. If it is not possible to allocate the funds according to this framework within this period, this amount would be invested in a bond meeting the Sustainable Bond criteria of another issuer.

4. Reporting:

ABZ publishes annual reports and an extended sustainability report. ABZ will also publish a report on each bond issued under this framework until the maturity of the last bond issued. The following measures are included in this report:

- Allocation of issue proceeds (in %) the volume of the issue.
- The number of cooperative dwellings financed by the bond.
- The number of financed apartments rented.
- Energy standards complied with by buildings.
- Energy sources used and emissions per inhabitant in tons of CO2equivalents caused by heat generation.

5.2.2. Equity financing

Equity financing for promoters of social and affordable housing involves raising capital by selling ownership stakes or shares in a project or property. Investors contribute funds in exchange for ownership equity, sharing in the project's risks and rewards. This form of financing provides capital for development without incurring debt, allowing stakeholders to participate in the project's success and potential profits.

5.2.2.1. Equity

General description

Traditional equity represents the portion of ownership of an asset. For energy-efficiency investments, it takes the form of the property owner's contribution to the projects. It represents the down payment on a mortgage loan or the portion of the project covered by the property owner's contribution. When this contribution comes from an external investor, a share of the control and the revenue of the project is received in return by the investor. Upon completion of the project, equity is the last residual claim to be paid to creditors.

Opportunities for social and affordable housing renovation

Private equity investment is a great opportunity for large property managers where the owner must cover large annual energy costs. Selling a share of the control of the energy consumption contract programmes can bring in an investor specialized in energy efficiency, which then can introduce energy efficiency measures. The low-risk and long-term nature of energy-efficiency projects attracts investors looking for stable returns. Another key advantage of equity financing actors is their proven proficiency in scaling projects. However, this has not been used for comprehensive renovations in residential buildings, as far as we know. In addition, guaranteeing savings on energy bills is complex and costly.

Some factors could explain the limited market share of equity investing in the energy efficiency for the rented residential sector. The contractual basis between property owners and tenants can limit the revenue potential, thus limiting the investor's potential renovation initiatives. Buildings connected to a district heating/cooling system cannot sell control of their heat generation source. Finally, projects must be large enough to cover the indirect and overhead costs of energy-efficiency investments, making small projects not financially viable.[121]

[121] Energy Efficiency Finance 101: Understanding the Marketplace. From https://www.aceee.org/files/pdf/white-paper/Energy%20Efficiency%20Finance%20Overview.pdf

Another case is the district heating and cooling networks developed by private investors. For new ones, the common way to finance them is through corporate finance by the company that has the concession to develop the network. It may also attract other investors to the project. Similarly for existing networks.

Nevertheless, there are success stories that, while not directly related to the energy retrofitting of buildings, have focused on the installation of solar panels in social housing or the use of renewable energy through public-private collaboration. These examples can serve as inspiration for extrapolating them to the renovation of social and affordable housing.

In the case of financing cooperative housing projects one of the most promising avenues is through equity financing. This method not only promotes community involvement but also ensures long-term financial stability. Equity financing involves raising funds from cooperative members or external investors who purchase shares. This approach fosters community participation, instills a sense of ownership, and cultivates commitment among the members. Equity investments provide the essential capital for energy-efficient renovations, the development of additional facilities, or property acquisitions within the cooperative housing sector.

By spreading the financial burden across numerous individuals, equity financing makes housing investment more accessible. This method can be particularly advantageous for low to middle-income individuals who may find traditional homeownership financially challenging. In contrast to debt financing, equity financing doesn't require regular repayments with interest. This aspect offers a more stable financial foundation for cooperatives, especially in fluctuating market conditions.

To access equity financing, cooperatives must establish a legal structure, often as a corporation, and adhere to federal, state, and local laws governing housing cooperatives and equity financing. This may involve registering with securities authorities if the cooperative seeks public fundraising. A clear governance structure is essential. This includes having a board of directors and transparent decision-making processes to instill investor confidence and ensure efficient cooperative management.

Accurate financial planning and regular reporting are crucial aspects. This encompasses budgeting, financial forecasting, and providing investors with consistent updates on the cooperative's financial health and progress. Maintaining open lines of communication with investors is vital. This involves educating potential investors about cooperative housing's nature and the specific project, as well as outlining the associated risks and rewards of their investment. When raising equity, cooperatives must comply with securities laws, which may entail disclosing financial information, business plans, and risks to potential investors.

Equity financing offers a viable and sustainable option for funding cooperative housing projects. It not only enhances housing accessibility but also empowers communities through shared ownership. However, succeeding in this endeavor necessitates strict adherence to legal

requirements, transparent governance, and effective communication with investors. By meeting these requirements, cooperatives can leverage equity financing's potential to construct resilient and inclusive housing communities.

An example of success of equity investment that can be analysed for future developments is the ASTER case in Flanders, Belgium (see Box 23), already mentioned in Chapter 3 on the ELENA facility, related to the installation of PV panels in social housing renovation projects.

Box 23: ASTER[122]

ASTER is a cooperative company whose purpose is to attract non-public funding for investments in sustainable energy applications for the social housing sector in Flanders.

In July 2022, it succeeded in securing a loan of €150 million from a private bank. The equity capital needed to take out the loan was brought together by social housing private companies through the issue of shares by ASTER. In this way, the limited equity capital acted as a lever to attract the private loan.

The loan obtained is 100% de-risked for the issuing bank because there is a regulation in Flanders that avoids the negative consequences of an eventual bankruptcy of a social housing company. In case the company is unable to meet its obligations, the project will continue, and its debts, control and management will be taken over by another social housing company.

This loan was granted with special conditions (interest rate of -1%) and allowed ASTER to start, in August 2020, the installation of 30,000 PV panels that will supply energy to more than 30,000 social homes. Furthermore:

- It reduces the electricity bills of all its tenants.
- It allows the sale of surplus energy to pay off the debt owed to the bank.
- When 150 MWp of solar panels have been installed, a CO2 reduction of 35,000 tonnes per year will be achieved.

Box 24 is an example of a public and private partnership to develop renewable energy for public buildings, which also can be extrapolated to social housing renovations:

Box 24: Berlin Energy Agency (BEA) – Public-Private Partnership[123]

[122] https://www.aster.vlaanderen/nl

[123] Berlin Energy Saving Partnerships. From: http://www.citynvest.eu/sites/default/files/library-documents/Model%202_Berlin%20Energy%20Saving%20Partnerships_final.pdf

Local authorities can take the example of the public-private partnership exploited by the BEA. As an ESCO, it prepares concepts, provides project management and implements measures in buildings. It works on more than 1,400 public buildings in Berlin and promotes the use of renewable energy. The BEA also participates in awareness and information campaign. Its initial funding was about €2.56M in equity. The shareholding is constituted equally between 4 entities: 2 private and 2 public. The Shareholders Federal State of Berlin and KfW Bankengruppe are the state and public development banks. Private equity came from GASAG Berliner Gaswerke AG and Vattenfall Europe Wärme AG, two gas utility companies offering services in Berlin.

How to access

To obtain equity investment from private investors, property owners must sell a portion of the control of their projects. Investors then receive a share of the revenue of the project. In the case of energy-efficiency projects, saving on energy bills may cover part of the cost, as mentioned before.

The focus here is access to external equity, not the own resources provided by the promoter of a renovation project. In general, part financing of a renovation project with external equity is rare. It can, however, be relevant for some specific energy investments, such as district heating and cooling networks or PV projects.

Depending on the ownership structure, different ways can be used to increase this portion. In the affordable and social sector, individual homeowners generally cover most of the cost of dwelling renovations with their own resources (see Chapter 2) and in the cases that they recourse to external finance, it is debt financing (consumer loans). Large property owners can raise equity in several ways. In the private rented sector, landlords can raise the rent of tenants, if the regulation permits it. When promoters are residents' associations, equity can be raised by augmenting the member's contributions. For large housing providers, equity can be raised by selling assets and contributions from tenants. Some large property owners may also raise external equity, but it is uncommon for public owners.

5.2.2.2. Impact investors

General description

In the realm of social and affordable housing, impact investing specifically involves providing financial support to initiatives aimed at addressing social issues and environmental concerns. Investors in this context have a clear expectation of achieving measurable positive impacts on both societal and environmental fronts, in addition to seeking financial returns. This approach emerges from the necessity to harmonize risk, return, and societal impact to enhance the well-being of individuals and the planet, aligning with broader sustainability goals.

Impact investing has gained popularity as a means to unite purpose and capital, fostering positive social change while generating financial returns.

One noteworthy avenue involves the creation of impact investing funds specifically dedicated to the renovation and development of social and affordable housing. These funds serve as financial pools designed to attract private capital, channelling it towards projects aligned with public priorities. They play a crucial role in advancing impact investing by providing a structured mechanism for aggregating and deploying capital efficiently. Matching programmes, coupled with incentives like credit enhancement, guarantees, and tax advantages, act as powerful tools to attract private investors to participate in them.

Opportunities for social and affordable housing renovation

Impact Investor funds take diverse forms, from philanthropy to pension funds. They are more risk-tolerant than regular private equity investors and they tend to accept reduced return rates.

Additionally, in recent years, many countries have proactively facilitated impact investing in the realm of social and affordable housing, creating national platforms for collaboration and adopting recommendations to encourage such initiatives. Once established, these platforms and/or funds serve as catalysts for social and affordable housing renovation projects, leveraging both private and public resources to address critical housing needs. They enable a collaborative approach where impact investors contribute not only financial resources but also expertise and innovative solutions, fostering sustainable and impactful outcomes in the housing sector.

There are two good examples in Spain of the creation of specific funds for the energy rehabilitation of homes: the Solidarity Fund for Energy Rehabilitation by the Naturgy Foundation (Box 25), focused on assisting the rehabilitation of social housing and vulnerable family homes.

Box 25: Solidarity Fund for Energy Rehabilitation[124]

The Fund is constituted with the contributions made by the Naturgy Foundation. In addition, monetary or in-kind contributions can be made by collaborating entities and companies.

[124] https://www.fundacionnaturgy.org/accion-social/plan-vulnerabilidad-energetica/fondo-solidaridad-rehabilitacion-energetica/

It is included as an example of good practice in the National Strategy against Energy Poverty 2019-2024[125]. It is aimed at homes of vulnerable families owned or managed by public administrations and third-sector entities.

Founded in 2018, it already has more than 3,000 express rehabilitations, related to wall and ceiling insulation, damp issues, carpentry, boiler repair or replacement, and appliance upgrades, as well as electrical installation repairs, among others.

The social entities they collaborate with select, from the homes of the families they support, those in most urgent need of renovations.

The assistance is provided free of charge to the families receiving it

The Securitization Fund RMBS Green Prado XI, covering a broader spectrum and oriented towards energy transition and social impact is presented in Box 26.

Box 26: Fund RMBS Green Prado XI[126]

Through this collaboration, EIB, ICO, and UCI join forces to promote the renovation and construction of residential homes with sustainable criteria in Spain and Portugal. These green investments align with UCI's strategy of providing sustainable financing for individuals and property communities The GBP recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures and disclosure of the key underlying methodology and/or assumptions used in the quantitative determination. Issuers should refer to and adopt, where possible, the guidance and impact reporting templates.

In this first joint transaction among the three parties, structured through the securitization of a portfolio of residential mortgages originated in Spain amounting to €490 million, the EIB Group and ICO acquire bonds with the aim of facilitating green investments.

This new Residential Mortgage-Backed Security (RMBS) securitization fund complies with the European STS (Simple, Transparent, and Standardised) criteria set out in Regulation (EU) 2017/2402 on securitization, as well as with Sustainalytics' Green Bond Framework. Additionally, the transaction meets the regulatory requirements of CRR

[125]https://www.miteco.gob.es/content/dam/miteco/es/prensa/estrategianacionalcontralapobrezaenergetica2019-2024_tcm30-496282.pdf

[126] https://www.eib.org/de/press/all/2023-165-eib-group-and-ico-invest-in-uci-securitisation-fund-for-renovating-and-building-residential-homes-using-sustainable-criteria-in-spain-and-portugal?lang=es

(Capital Requirements Regulation) and LCR (Short-Term Liquidity Coverage Ratio) for investors.

The funds generated will finance new green and sustainable loans for individuals and property communities undertaking investments in building renovations.

The project will contribute to the mitigation of climate change and align with the European Commission's Renovation Wave strategy and ESG standards and goals.

How to access

It is important to mention that all impact investment funds have their investment strategy where it is clearly defined the impact they are looking for. In this sense, when trying to finance a project through impact investment fund it is important to screen for those funds that have a strategy aligned with the specific objectives of the project.

When seeking liquidity from impact investment funds for energy-efficient renovations in the context of social and affordable housing, the application process varies based on the type of applicant—whether it is a homeowner, social housing association, public authority or private company acting as an intermediary.

As a homeowner, the focus should be on identifying funds that directly provide assistance or financial aid for energy-efficient renovations. Ensure that the renovation project aligns with the fund's ESG criteria. Clearly demonstrate the social impact of the renovation, the necessity in case of vulnerable families, emphasizing improvements in energy efficiency and the reduction of carbon emissions.

Public authorities, social housing associations and private companies focused on social and affordable housing renovations, should clearly demonstrate how their project aligns with the fund's ESG goals and contributes to the local community and environmental sustainability. Investigate funds that offer guarantees to cover loans taken by public authorities for housing renovations, as well as different credit loans supported by these funds and other financial aids and technical assistance.

Overall, successful applications across these roles will emphasize the social and environmental impact of the proposed renovations, align with the fund's ESG goals, and meet any specific criteria outlined by the fund or financial intermediaries involved.

5.2.2.3. Citizen financing

General description

Citizen financing can be split into two categories:

1. **Community financing** refers to financial initiatives and mechanisms that involve the collective contributions of a community to fund projects or enterprises. It often entails individuals or local entities pooling resources to support initiatives that benefit the community as a whole. In community financing, usually, a local community uses a cooperative structure;

2. **Crowdfunding** is a financing method that involves raising small amounts of money from a large number of people, typically through online platforms or websites. Crowdfunding methods often follow various approaches based on the project's intended objectives. In **equity crowdfunding**, for instance, contributors—often investors—receive a stake or equity in the project or business in exchange for their financial support. In this arrangement, backers become shareholders and hold a potential financial interest in the success of the venture. Conversely, crowdfunding can take other alternative approaches, such as providing small investors with discounts on project services or offering contributors a way to align their interests with ESG criteria or personal concerns.

In **community energy projects**, the investors usually live in the area where the investment takes place. The social network created out of this proximity makes the aggregation of participants easier.

Crowdfunding, on the other hand, consists of the aggregation of investors who have no direct link to the project being funded. Citizens must trust the website offering the scheme and the projects' promoters to invest in the project.

Opportunities for social and affordable housing renovation

Both instruments are currently used to fund renewable energy projects and could be used to fund energy renovations of social and affordable housing.

Community financing is a great opportunity for social cohesion and has a low cost of financing since participants are willing to provide funds at a lower cost. However, disadvantages include the limited number of projects completed and its limited capacity to reach out to a large number of investors[127].

[127] https://valueandrisk.eefig.eu/financialinstitutions

A great example of community financing is the organisation Énergie Partagée, presented in Box 27. Other possible issues are related to the capacity to identify bankable projects and assess their financial viability, as well as reaching agreements among the different investors.

Box 27: Energie Partagée in France[128]

Énergie Partagée supports and finances citizen projects to produce 100% renewable energy in France. It focuses on community financing, but the cooperative is open to any qualified investors. It gathers equity from citizens in order to invest in a community-owned energy project. Today more than 300 projects have been completed.

The Energie Partagée team is divided between an association and a cooperative and has five areas of activity. The association centralizes the functions of animation and mobilization at national and regional levels. The cooperative develops the projects itself.

Furthermore, one of the biggest hurdles faced by crowdfunding platforms is their reach-out capacity and the amount of investment that can be obtained through them. Also, in the past, it was difficult for platforms to offer their services across borders. This resulted in high compliance and operational costs, which prevented crowdfunding platforms from efficiently scaling. In 2020, the EU passed the Regulation on European Crowdfunding Service Providers (ECSP) for businesses aiming at resolving this issue. The regulation lays down uniform rules across the EU for crowdfunding services. Investors will benefit from mandatory disclosures from project owners and platform managers regarding governance and risk management.

There are numerous crowdfunding platforms or initiatives that aid or have aided in the realization of projects related to energy transition or the rehabilitation of social housing for individuals facing social exclusion.

Caritas Zaragoza, Spain, launched a crowdfunding campaign in January 2023 for the rehabilitation of a home belonging to a family in a situation of social exclusion (See Box 28).

Box 28: "Techo digno" campaign[129]

At the beginning of 2023, Caritas Zaragoza initiates a crowdfunding campaign named 'Techo digno' (Dignified Roof) for the rehabilitation of a home belonging to a family in the rural area of Zaragoza. The project, which required a contribution of €2,700, has

[128] https://energie-partagee.org/

[129] https://www.caritas-zaragoza.org/campana-de-crowdfunding/

been successfully completed with contributions from various individuals (€2,070) and funds from Caritas Zaragoza's own resources.

The organization launched this new collaboration avenue for its social action projects with the aim of facilitating and expediting the assistance provided to the most vulnerable families. Contributions have allowed for an improvement in the living conditions of a family with a young girl. The father experienced a serious accident that prevented him from continuing his work life. The roof of their home had significant damage and leaks, requiring rehabilitation to mitigate risks and endure the winter with less cold, as it was an old property lacking any form of energy efficiency.

iHelp is a solidarity crowdfunding platform that has included social housing renovation projects in the past and remains open to this type of initiative (See Box 29).

Box 29: iHelp[130]

The iHelp platform, managed by the foundation of the same name, boasts over 17 years of experience as facilitators of donations for NGOs. They base their method, as they claim, on 'effective altruism,' ensuring a secure and transparent process.

iHelp was launched in 2016, revamping Cibersolidaridad.org, a charitable project that has been in operation since 2001 and stands as the first solidarity crowdfunding platform to operate in Spain.

Among all the sectors it provides assistance to, the 'Environment and Ecology' stands out as the suitable section to promote any project involving the energy renovation of social housing or for individuals with low resources or in vulnerable situations.

A great example of a crowdfunding platform is the organisation GOPARITY presented in Box 30.

Box 30: GOPARITY[131]

The platform GOPARITY in Portugal is a great example of a successful crowdfunding scheme. In 2019, an energy production project in the city of Castelões raised €67,000 to finance the installation of PV energy production.

[130] https://www.ihelp.org.es/

[131] https://goparity.com/

The funds raised through this campaign have been used to finance a project in a small town in the North of Portugal. A total of 86,2 kWp (kilowatt 'peak') has been installed. This community is one of the three plants to be installed in the parish of Calvão.

The promoter of the project is an organisation called Cleanwatts. The mission of this project is to fight energy poverty by creating renewable energy communities that produce their electricity and promote energy-efficiency practices. Members will get a price 25% lower than the price of the national grid during sunny hours.

Finally, another case in point, which combines the two categories of citizen financing, is the case of Respira.coop, it is explained in Box 31. This project helps citizens, enterprises and public administrations to create Renewable Energy Certificates (RECs) and support the start-up phase.

Box 31: Respira.coop[132]

The platform Respira.coop has been implemented in 2022 by Coopfond (Italian Cooperative Fund), Legacoop (Association of cooperative enterprises), Banca Etica and Ecomill (crowdfunding platform), with the aim to promote RECs in a cooperative form.

Respira.coop provides support to the community about legislative aspects, both national and European, and cooperative law, economic incentives, business plans, and finally, access to funding: a range of tools and partners ready to operate and set up a REC for all.

- Legacoop, a multi-sector national association of cooperatives, supports its members as well as new members to comply with the Italian law regarding RECs, it provides statute drafts and related documents.
- Coopfond, the mutualistic fund of Legacoop, finances feasibility studies to set up RECs. Then, it supports the first round of investment.
- Banca Etica, the first Italian Bank entirely focused on ethical finance, provides loans to build renewable energy systems.
- Ecomill, a crowdfunding platform for energy transition, launches campaigns to finance the construction of renewable energy systems.

[132] https://www.respira.coop/

How to access

To access **energy community financing**, the initial step involves creating an energy community aligned with the standards outlined by the EU[133] and its member states. This community, often structured as a cooperative, should adhere to legal and regulatory frameworks, establish clear governance, and ensure compliance with environmental and community engagement standards. Once formed, the community can proceed with project development, financial planning, and community engagement. To access financing, the community must navigate the application process, submit project proposals, and collaborate with stakeholders and local authorities to enhance credibility and support.

In the context of social and affordable housing, social housing associations, private entities acting as intermediaries, and homeowners facing financial constraints can utilize these **crowdfunding platforms** for energy renovation projects. Ensuring alignment with the platform's guidelines and providing all necessary documentation for acceptance are crucial steps in this process. It is an application process that does not involve great complexity; however, it is recommended to choose the appropriate and widely reaching platform, as many of these projects sometimes fall short of the desired total funding.

[133] https://energy.ec.europa.eu/topics/markets-and-consumers/energy-communities_en

5.3. Alternatives to attract private financing

5.3.1. Blended finance

General description

Combining grants with other financial instruments (loans, guarantees or equity) from the public and private sectors is a mechanism known as 'blending finance'. Blending a grant with another financial instrument may enable to facilitate financing of certain projects, by reducing the financing cost or de-risking them. In addition, it may be able to increase the private finance available for the projects[134].

Promoters can also use grants to finance project preparation studies and to facilitate the financing of renovation projects by low-income households. In this case, grants often cover most of the cost of the project. The essence of blended finance lies in its ability to enhance the financial viability of projects by leveraging different funding sources. By blending grants with other instruments, it becomes possible to unlock additional private-sector funding, thereby expanding the pool of financial resources available for these critical housing initiatives. This approach is particularly valuable in addressing challenges associated with affordability and accessibility.

It's important to distinguish blended finance from a mere "combination of funds." While a combination of funds generally refers to the pooling of various funding sources without a specific strategic approach, blended finance involves a deliberate and structured blending of grants with other financial instruments. This nuanced strategy is geared towards maximizing positive outcomes in social and affordable housing renovations by efficiently utilizing diverse financial tools to address specific project needs.

Blended finance and the combination of EU funding sources are both mechanisms used to catalyze investment for development and infrastructure projects, but they differ significantly in their approaches and objectives.

Blended finance typically involves the strategic use of grants to de-risk and attract private sector investment into projects with a social or developmental impact. In this model, grants are provided as concessional capital or guarantees to reduce the perceived risks for private investors, thus making the projects more attractive. Blended finance is often used to bridge the financing gap in projects that might not otherwise attract sufficient private sector interest due to their perceived riskiness or lower financial returns. It focuses on leveraging private sector capital for projects that align with specific social or environmental goals.

[134] Boosting Investment in Social Infrastructure in Europe. From https://economy-finance.ec.europa.eu/publications/boosting-investment-social-infrastructure-europe_en

On the other hand, the combination of EU funding sources refers to the utilization of various EU funding programs and instruments to support projects and initiatives across the European region. These sources include grants, loans, and guarantees, among others, and aim to promote economic growth, cohesion, innovation, and sustainability within the EU member states. Unlike blended finance, the combination of EU funding sources primarily involves the integration of different funding streams provided by the European Union itself, often with a focus on advancing regional development, research and innovation, and addressing specific policy objectives within the EU.

In summary, while blended finance seeks to attract private sector investment by mitigating risks and achieving specific development goals, the combination of EU funding sources focuses on leveraging financial resources provided directly by the EU to support a wide range of initiatives and policies within its member states. Both mechanisms play crucial roles in advancing sustainable development, but they do so through different means and for distinct purposes.

Opportunities for social and affordable housing renovation

The most common combination is to package soft loans, grants and homeowners' own contributions. Soft loans alone might not be sufficient to encourage homeowners to participate in the project. There are different ways to combine grants with other financial instruments. Promoters should adopt the optimal combination depending on the project scope and objectives. The intensity of grants normally increases as the projects target higher EE improvements or lower incomes[135]. This strategic mechanism aims to optimize the impact of financing for specific projects within the realm of social and affordable housing renovations.

The Bordeaux Métropole (Box 32) serves as an excellent illustration of blended finance effectively harnessing the power of green and soft loans, combined with grants, by securing financial support from national, regional, and local authorities.

Box 32: Bordeaux Métropole, France[136]

The city provides loans to a selection of homeowners whose buildings were built before 1st January 1990 since those buildings were built with lower energy-efficiency standards than the modern ones. Owner-occupied housing units are the main target, but rented properties are also eligible.

[135] Technical Guidance: Financing the energy renovation of buildings with Cohesion Policy Funding. From https://op.europa.eu/en/publication-detail/-/publication/4ef2fc24-67d0-45c2-a6d1-c677574e6d26/language-en/format-PDF/source-251171406

[136] https://marenov.bordeaux-metropole.fr/

Through its communication campaign, the Metropole mainly targets low to medium-income households. Bordeaux Metropole realised that one product would not fit all households which led to the development of tailor-made products for low to medium-income households and for very low-income households.

In Bordeaux Metropole, very low-income end-users can have all their energy renovation works paid through a combination of national, regional and local grants. Simultaneously, they receive comprehensive financial assistance on preferential loans or other types of low-cost financing, accessible when the grants alone are insufficient to fund the renovation works.

The platform enables users to specify the desired type of renovation, their income level, and the targeted energy savings. From this information, it estimates all available grants, streamlining their application (including support for pre-feasibility studies, energy audits, and home rehabilitation, as well as subsidies for green bonds and PV panel installation). Subsequently, based on the need for additional capital beyond the obtained grants, it advises users to cover the remaining amount with other forms of debt financing.

Additionally, it also provides assistance not only to individual homeowners but also to property communities and even social housing associations.

The amount of the grants will depend on the promoter's characteristics and the programmes that the state, region, and municipality are implementing at the time. As of December 2023, these grants can range from €2,300 to €11,000 per individual dwelling. On the other hand, the green loan (eco-PTZ) for which they provide guidance can currently go up to €50,000, and it is granted at a zero-interest rate.

Homeowners can access all information on a platform and open their personal 'energy renovation account' where they can exchange information with an energy advisor. Bordeaux Metropole is able to monitor the activity of energy advisors, the number of loans disbursed and households' profiles. Depending on the data the households are willing to communicate, it's possible to consult actual energy savings and overall satisfaction of end-users.

How to access

When designing or selecting a blended finance mechanism, promoters need to consider the specific characteristics of their market. The level of financial maturity, relevant stakeholders and renovation scope of the project will influence the implementation of the instrument. Effective instruments address primarily the needs and capacity of end-users.

Furthermore, it is advisable to gather information in advance about all types of grants available at the European, national, regional, and municipal levels. This type of assistance constantly varies over time, but currently, all EU member states are implementing them to a greater or lesser extent.

To facilitate this access, it is also recommended to seek guidance from One-Stop-Shops dedicated to home energy renovation. The trend in recent years, driven by the European Commission[137], its member states, and various private entities, has been to offer all these technical and financial advisory services through the creation of such offices, both physically and online. In these offices, not only individual homeowners can benefit from their services but also entities like social housing associations and even organizations affiliated with public entities.

5.3.2. Project bundling

General description

Project bundling refers to the strategy of combining multiple individual projects or initiatives into a single, larger package to attract increased private financing. This approach is employed to enhance the overall attractiveness of the bundled projects, making them more appealing to private investors and financiers. By consolidating projects, organizations can create economies of scale, reduce risks, and optimize returns, ultimately increasing the likelihood of securing additional funding from private sources.

Project bundling is often used in sectors such as infrastructure, building and district-level renovations, renewable energy, and community development to maximize the impact and efficiency of financing efforts.

Opportunities for social and affordable housing renovation

Since most of the district-level housing renovation projects tend to regroup small investments, promoters should consider bundling them to increase the total investment amount. This not only allows to increase the amount of investment to be financed but also can diversify the investment risks.

Social housing associations often own lots of similar buildings. This facilitates financing for the reasons mentioned before. Lastly, since local authorities own housing and infrastructure as well, this gives local authorities options to bundle several different projects together in the context of an urban renovation plan. For example, housing infrastructure could be bundled, with public buildings, public infrastructures (such as parks), etc.

[137] https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/one-stop-shops-building-renovation-integrated-solution-close-gap-between-customers-and-suppliers-2021-07-19_en

Different strategies can be followed, either bundling similar projects, different types of projects (but with similar objectives) in a single site; or different types of projects on different sites. In any case, financiers will prefer a certain level of standardization, in order to reduce appraisal costs and to evaluate projects' environmental and social impacts.

In this regard, it is worth noting EIB's preference for bundling projects to achieve higher and more attractive funding amounts with lower risk. Project bundling offers several benefits for public entities. Firstly, it enables economies of scale, allowing for the consolidation of smaller projects into a larger, more cost-effective endeavor. This can result in reduced overall project costs and increased efficiency. Secondly, bundling can attract greater private sector interest and investment, as larger projects often appear more financially attractive to potential partners. Additionally, it simplifies project management and oversight by centralizing resources and expertise, streamlining administrative processes, and enhancing overall project coordination. However, public entities and social housing associations may face barriers in implementing bundling strategies, including the need for effective project selection and prioritization, complex procurement procedures, and potential resistance to change within established project management practices. Overcoming these barriers requires careful planning, stakeholder engagement, and a commitment to adapting to the evolving landscape of project delivery.

Refer to Box 33 where a good example is presented, enabling financing from EIB of €61 million.

Box 33: Irish Social Housing PPP Programme[138] [139]

Ireland's Social Housing Bundle 1 encompasses the financing, design, construction and maintenance of six social housing sites in Dublin over a 27-year concession. Hundreds of new homes are being built in Dublin, Louth, Wicklow and Kildare with the help of multi-million-euro financing from the EIB.

Ireland suffers from a social housing shortage and the PPP model is now being used to develop a total of 1,500 units across the state that will provide badly needed homes for low-income families. Given the robust regulatory and urban planning framework in Ireland, the project is expected to be informed by a planning-led approach to urban development. The proposed operation will help meet housing needs in locations experiencing significant shortages, integrating social housing with open market housing. High regulatory standards should ensure the application of adequate standards regarding energy efficiency, sustainability and the active involvement of

[138] https://www.macquarie.com/au/en/insights/irelands-first-social-housing-ppp.html

[139] https://www.eib.org/en/projects/all/20160820

tenants. Furthermore, the housing investments to be funded will generate significant employment during their implementation.

Bank of Ireland, Macquarie Capital and Korea Development Bank are also backing the project, but it's the first time in Europe that the EIB has financed a PPP social housing scheme.

By increasing the supply of social and affordable housing, the project will help reduce the degree to which income is a factor in securing suitable housing, thus delivering greater social inclusion.

The framework loan is to provide financing for three different social housing bundles. The loans will provide financing to private sector partners to construct, finance, operate and maintain the bundles. Repayments are to be made using funds from availability payments from a public sector body based on a 25-year project agreement.

The EFFECT4 buildings project serves as a good example for energy efficiency social and affordable housing renovations (Box 34):

Box 34: EFFECT4 buildings project[140]

The project EFFECT4buildings provided building owners with a set of tools to support the implementation of energy efficiency measures. The main target group is building managers in charge of public or privately owned building portfolios.

The promotion of bundling projects and retrofit measures into a single portfolio is at the centre of the initiative. Instruments are available for promoters wishing to build strong investment cases. Project bundling reduces the total project costs compared to separate initiatives. High-return investments can be combined with lower ones.

EFFECT4buildings was in action from 2017 to 2020 with the contribution of the Interreg Baltic Sea Region Programme 2014-2020.

There were seven partner countries – Denmark, Estonia, Finland, Latvia, Norway, Poland and Sweden.

How to access

Adequate bundling strategies facilitate obtaining private or public financing. Achieving scale is a critical issue to minimise the cost of finance and this is often problematic in the case of the

[140] https://www.effect4buildings.se/toolbox/bundling/

building renovation market. This market is characterised by small projects that involve numerous types of work and equipment.

Social housing associations and public authorities aiming to embark on energy-efficient housing renovations through project bundling must strategically navigate several key considerations. Firstly, embracing the diversity of renovation projects within a concentrated geographic area is vital for optimization. This approach allows for shared logistics, local stakeholder engagement, and holistic improvements to the building envelope and energy systems.

Initiating the bundling process involves conducting thorough pre-feasibility studies to identify potential projects, collaborating with local partners such as contractors and technology providers, and assessing the regulatory landscape to align projects with existing frameworks.

Successful bundling also hinges on comprehensive financial structuring, detailing anticipated costs, potential savings, and financing needs. By adhering to these criteria, social housing associations and public authorities can effectively kickstart and navigate the project bundling process, laying the groundwork for impactful energy-efficient housing renovations.

5.3.3. Risk-sharing facilities

General description

A risk-sharing facility is a financial arrangement or mechanism in which multiple parties agree to share the risks associated with a particular venture or transaction. It involves the distribution of risks among different entities, often to reduce the impact or exposure of any single participant. This can include agreements between financial institutions, governments, or other entities to collectively manage and mitigate the financial risks associated with a specific project or initiative for remuneration. However, some facilities have been established by public institutions, where the facility is not remunerated, in order to support certain policies, such as the Private Finance For Energy Efficiency (PF4EE)[141].

In the most common case of a portfolio of bank loans, the entity establishing the facility covers part of the risks of non-payment of the loans. This facility can contribute to increasing lending in certain sectors, such as building renovation, and reduce the cost of financing or guarantee requirements.

As indicated, publicly backed guarantees and insurance schemes can use risk mitigation to steer the flow of private funds towards district-level social and affordable housing projects.

[141] https://www.eib.org/attachments/pf4ee-3rd-request-for-proposals-to-select-fis.pdf

Risk-sharing facilities encourage greater amounts of private sector capital to be deployed in priority sectors, including in district-level renovations.

Opportunities for social and affordable housing renovation

When engaging in a risk-sharing facility as a promoter of a social and affordable housing renovation project, there are several potential benefits. Firstly, it enhances access to financing by sharing the financial risks among participants, making lenders more inclined to offer favourable terms. This collaborative approach reduces financial barriers, potentially leading to lower interest rates on loans or increased funding availability.

Secondly, participating in a risk-sharing facility can make the projects more appealing to investors. The shared risk management demonstrates effective risk mitigation, fostering investor confidence. Moreover, the collaborative nature of the facility may attract public funding or grants, providing additional financial support for the project. As public authorities and social housing associations, leveraging these benefits can enhance the feasibility and success of energy-efficient renovation initiatives in the social and affordable housing sector.

A great example of leveraging the risk-sharing facility mechanism is the Anderlechtse Haard project for energy efficiency measures at district-level (See Box 35). The project can serve as inspiration for a comprehensive district-level renovation of social and affordable housing.

Box 35: Energy eEfficiency improvements at Anderlechtse Haard, Financed through the Belfius Energy Efficiency Package (BEEP) [142]

EDF Luminus Solutions (third-party investor and service provider) and Anderlechtse Haard (one of the largest social housing companies of the Brussels Capital Region) signed an Energy Performance Contract to improve the energy efficiency of Anderlechtse Haard's social housing. The following measures have been implemented:

- 15 new Building Management Systems;
- 7 PV systems with 168 solar panels;
- 7 cogeneration units;
- 31 new boilers.

In addition, EDF Luminus Solutions is providing maintenance/reparation services offer technical installations. The project is financed through Belfius Energy Efficiency Package (BEEP).

[142] https://pf4ee.eib.org/sites/default/files/2019-06/PF4EE-ESF_OCT2018_Showcase%20Belfius%20EDF%20Luminus.pdf

The project obtained a loan of €3.75 million (93% of CAPEX) at a preferential rate through the PF4EE mechanism, which included the risk-sharing facility, achieving an annual primary energy savings of 5,324,000 kWh.

How to access

The main weaknesses of risk-sharing mechanisms are their contractual complexity and thus require specialist knowledge, as it takes time to structure and negotiate. However, for a promoter of social and affordable housing projects seeking access to a risk-sharing facility, the first step involves identifying suitable financial institutions or partners that offer such mechanisms. Collaboration with public entities, development banks, or specialized finance institutions experienced in risk-sharing arrangements is crucial.

Once a potential partner is identified, the promoter can initiate discussions to understand the specific terms, conditions, and eligibility criteria for participating in the risk-sharing facility. The process often involves detailing the project's scope, financial structure, and risk allocation, demonstrating a clear alignment with the goals of the risk-sharing institution. Building a strong case for the social and environmental impact of the housing renovation project enhances the promoter's chances of securing favourable terms within the risk-sharing arrangement.

5.3.4. On-bill and On-tax financing schemes

General description

Another mechanism for repaying energy efficiency investments is whereby payments are recovered through the existing payment collection infrastructure, such as through utility bills (on-bill) or property tax (on-tax).

On-bill financing is typically offered by utility companies or financial institutions in partnership with utilities. **On-tax financing**, on the other hand, involves public authorities, often at the local or municipal level, incorporating payments associated with energy efficiency improvements into the tax obligations of homeowners or building owners

These approaches aim to make energy-related investments more accessible to consumers by aligning repayment with energy savings, creating a convenient and straightforward way to finance sustainable upgrades.

Property Assessed Clean Energy (PACE) programmes, directly related to on-bill financing, are innovative mechanisms to promote energy efficiency investments. Loans are offered specifically to conduct energy-efficiency works. Loans are attached to the house itself, giving access to financing to low-income homeowners. Under these programmes, a loan is given to

a building owner, but the loan is attached to the property and reimbursed through property taxes. If the building is being rented, the tenant pays the tax and benefits from the energy savings. A change in tenant has no impact on the repayment. However, limitations included property tax laws and regulation and the resistance of some banks to finance mortgages on houses that already have PACE loans attached to them. In case of default, the mortgage could come second after the property taxes, leaving banks more exposed[143]. A pilot of PACE has been developed in the EU (EuroPace[144]), but at this stage, it faced difficulties in scaling up.

Opportunities for social and affordable housing renovation

While both mechanisms are not always explicitly designed for the renovation of social housing, their promoters, as well as individual homeowners of affordable housing and low-income families, have been able to benefit from them, as no initial monetary contribution is required on their part for home or building renovations.

Moreover, on-tax financing serves as a clear and inspiring mechanism for public authorities at any level to develop and provide benefits to residents of social and affordable housing. This mechanism is often specifically designed to address energy poverty.

As far as we know on-bill financing has been used in two building renovation initiatives in Europe, EnergieSprong[145] (See Box 36), and the Green Deal[146] in the UK. The latter was abandoned, among other reasons, due to its very limited uptake.

Box 36: EnergieSprong[147]

EnergieSprong is a pioneering programme that originated in the Netherlands in 2010, introducing and retrofitting houses to meet high energy efficiency standards. This initiative has since expanded its footprint to countries like the United Kingdom, the United States, France, and Canada. The programme involves attaching a panel shell to the exterior of existing buildings to significantly enhance their thermal efficiency.

Launched by the Dutch government, EnergieSprong focuses on retrofitting existing structures to achieve zero-energy status. Through collaborations with social housing companies and contractors, the programme successfully retrofitted 111,000 houses in

[143] Boosting Investment in Social Infrastructure in Europe. From https://economy-finance.ec.europa.eu/publications/boosting-investment-social-infrastructure-europe_en

[144] https://cordis.europa.eu/article/id/422271-a-home-based-financing-model-to-boost-investments-in-sustainable-renovation

[145] https://energiesprong.org/

[146] https://www.gov.uk/green-deal-energy-saving-measures/how-to-pay

[147] https://www.governo.it/it/superbonus

the Netherlands. Following the retrofit, these homes attain net-zero energy, generating the total energy they need for their own requirements.

An Energiesprong renovation (or new built) is financed in two ways: through energy cost savings from tenants and by reduced maintenance and repairs costs for housing associations. Both are part of the business case. The objective is that tenants have the same monthly expenses – they pay the housing association an energy service plan instead of the bill of the energy supplier. The housing association can now use this new income stream to pay for the renovation.

A great example of on-tax financing that has been successfully developed in 2023 is the Municipality Retrofitting Scheme (GVR) in the Netherlands (See Box 37).

Box 37: Municipality Retrofitting Scheme (GVR)[148]

The GVR is a collaboration between De Woonpas, municipalities, retrofitting companies and financiers. It was developed with the support of the European Commission (Horizon 2020), within the scope of the FITHOME project.

The GVR removes all barriers for homeowners in order for them to participate in the energy transition and profit from a more sustainable home. Homeowners participating in the GVR can retrofit their homes without hassle and without an investment of their own.

All homeowners in participating municipalities can register for the GVR. There are no requirements or conditions for participation. For the execution of the GVR, each municipality works together with a local partner. This GVR operator services and unburdens the homeowners in the total process, from A to Z.

During an extensive home inspection, it is determined which retrofitting measures are possible. These measures consist of insulation, glass and solar panels.

The homeowner does not have to invest himself. The local GVR operator takes care of the execution. To guarantee quality, the GVR is only open to carefully selected partners.

The participating homeowner pays his municipality a fixed local tax per month as long as he or she owns the house. The GVR is bound to the house and when the house is sold, the GVR passes over to the new owner. The total duration of the GVR is a maximum of 30 years.

[148] https://www.youtube.com/watch?v=_DRw7yvvZ2o

Besides the fixed tax to be paid per month, there is a saving on the energy bill which is about the same amount. During the term of the GVR, the savings will increase as a result of rising energy prices and inflation. A participating homeowner benefits from a sustainable future-proof home and ever-decreasing monthly costs from day one.

As part of the FITHOME project, approximately 150 homes will have undergone complete energy renovations by May 2024. Additionally, the scheme plans to continue its operations thereafter and expand its implementation to a greater number of municipalities across the country.

Additionally, another example of energy efficiency projects that have relied on on-tax credit financing programmes can be found in recent years, such as the Superbonus 110% in Italy which is explained in Box 38.

Box 38: Superbonus 110%[149]

The Superbonus is the tax advantage governed by Article 119 of Decree-Law no. 34/2020 (Relaunch Decree), which consists of a deduction of 110% of the expenses incurred starting from 1 July 2020 for the implementation of specific interventions aimed at energy efficiency and static consolidation or reduction of the seismic risk of buildings. Among the facilitated interventions is also the installation of photovoltaic systems and infrastructures for charging electric vehicles in buildings.

The 2022 budget law extended the facilitation, providing for different deadlines depending on the subjects who bear the eligible expenses.

How to access

Accessing the benefits of on-bill or on-tax financing as a promoter of energy-efficient renovations for social and affordable housing is not a complex process. To qualify, it is generally needed to meet certain criteria set by the relevant financing programmes or initiatives in the region where the project is being developed. These criteria may include but are not limited to, demonstrating the energy efficiency improvements the project aims to achieve, outlining the scope and scale of the renovation, and ensuring compliance with any specific eligibility requirements outlined by the financing entities.

Additionally, the project should align with the goals and objectives of the financing programmes, emphasizing the positive impact on energy savings, environmental

[149] https://www.governo.it/it/superbonus

sustainability, and social welfare. It is advisable to engage with local authorities, specialized finance institutions or social housing foundations to understand the specific requirements and procedures for accessing on-bill or on-tax financing in the targeted area.

5.3.5. ESCOs

General description

Energy performance contracting (EPC) is an arrangement in which an energy service company (ESCO) enters into an integrated contract with the end user and the financing institution to design and implement energy efficiency measures with a guaranteed level of performance. When entities dependent on the public administration formalize the arrangement with the ESCO, it constitutes an instance of a Public-Private Partnership (PPP).

Savings can be used to repay upfront investment costs. Under an EPC arrangement, the ESCO uses the stream of income from the cost savings or energy produced, to repay the costs of the project, including the costs of the investment. Essentially the ESCO will not receive its payment unless the project delivers as expected. Any failure or shortfall requires reconciliation with lenders.[150]

Opportunities for social and affordable housing renovation

ESCO market in Europe focuses on public, commercial buildings, and industry. There are very few examples of ESCO-type approaches in the residential sector; however, they have been gaining more relevance in recent years.

The most notable example is that of third-party financing entities in France, which finance residential energy renovations; although they represent a tiny part of the French renovation market, an example of this type of financing is explained in Box 39.

Box 39: Presentation on ESCO and Third-Party financing in France[151]

In France, the first EPC with third party investment in the social housing sector was started in 2011 for 64 social dwellings in Strasbourg. The works consisted of deep energy renovation.

[150] Residential Retrofits at district scale Business Models under Public Private Partnerships. From https://aiguasol.coop/wp-content/uploads/2018/12/Residential_Retrofits.pdf

[151] https://www.eceee.org/library/conference_proceedings/eceee_Summer_Studies/2013/5a-cutting-the-energy-use-of-buildings-projects-and-technologies/escos-for-residential-buildings-market-situation-in-the-european-union-and-policy-recommendations/2013/5A-524-13_Irrek.pdf/

Rents were not raised because of energy efficiency investments. Revenue is generated through the saving on the energy bills paid to the SHO for 15 years. Measures are estimated to save around €22,400 /year. Savings are shared between the tenants and the SHO.

The approval of the majority of tenants was mandatory to start the project. The EPC states that the ESCO must pay penalties in case the consumption exceeds the expected target. The risks of payment default by the ESCO payments are taken by the SHO.

Box 40 also explains an example of a Lithuanian ESCO.

Box 40: ESCO for building rehabilitation[152]

In 2016, the Lietuvos Energija group (owned by the Lithuanian Ministry of Finance), consolidated its energy efficiency projects under a single Energy Service Company (ESCO). The ESCO invests in the modernisation of both public and private buildings, reclaiming investment from customers through a monthly service fee. As well as energy efficiency renovations, the ESCO also funds the development of electric vehicle charging infrastructure. Funding for the ESCO came from the Lietuvos Energija group, combined with money borrowed from commercial banks. In its first year of operation, the ESCO funded ten projects, saving 16,800 MWh of energy.

There is also another good example in Brussels, the company BRUSOL use the ESCO model, and since they started in 2018, they have provided green electricity to 7000 households, this example is explained in Box 41.

Box 41: ESCO and Third-Party financing in Brussels: BRUSO company[153]

Brusol operates in the Brussels-Capital Region and invests in green electricity (thus contributing to reduce CO2 emissions). The company recovers the investment through green certificates issued by the Region. This business model has been operating since 2018 and remains profitable even though the certificates have been reduced at the beginning of 2023.

Brusol installs the panels completely free of charge and offers the first 10 years of green energy consumption for free and for the following 15 years it offers a kWh rate more beneficial than in any other market. Brusol guarantees 25 years of savings on the bill.

[152] https://www.interregeurope.eu/sites/default/files/inline/TO4_PolicyBrief_Financial_Instruments.pdf

[153] https://www.brusol.be/en/solarpanels

They manage the entire installation without charging any fee. It is explained on the web in three easy steps:

1. Register: Contact the company to give details and arrange a visit to analyze the roof and measure everything.
2. Brusol installs: The company installs solar panels free of charge and in one day. It also has 25-year insurance against fire, water and storm damage.
3. Households save money: they receive cheap green energy for at least the next 25 years.

How to access

Promoters of social and affordable housing renovations seeking to engage in EPC contracts typically follow a structured process. They begin by conducting a thorough assessment of renovation projects, identifying areas for energy efficiency improvements. After selecting a suitable ESCO with relevant experience, detailed energy audits are conducted to understand specific efficiency needs. The negotiation phase involves defining contract terms, including efficiency goals, timelines, investments, and financial structures. Clarity on performance metrics and guarantees is crucial. Regulatory and financial approvals may be necessary, depending on the project's scale and jurisdiction. Once the contract is signed, the project is implemented, with continuous monitoring to ensure the achievement of energy efficiency objectives over time. This process may vary based on location, project size, and local regulations, underscoring the importance of seeking specialized advice and collaboration with energy efficiency experts and ESCOs.

When promoters are looking for ESCO financing, they have to keep in mind that not all projects fit the investing strategy of all ESCOs. Some organisations could be looking for projects with short payback period like HVAC component replacements and automaton or LED lighting installation, while other could be looking for more long-term payback, like for works related to deep renovations. Since the payback period of deep renovations can amount to more than 10 years and projects are complex, interest from ESCO investors is lower than for other shorter payback projects.

An issue commonly encountered in EPC contracts involves the potential discrepancy between anticipated and actual energy efficiency gains[154]. Factors contributing to this misalignment include variations in user behaviour, changes in climatic conditions, and other unforeseen external variables. Effectively addressing this issue requires the incorporation of clear contractual provisions and mechanisms to account for potential deviations in performance.

[154] https://www.sciencedirect.com/science/article/abs/pii/S0959652620309550

Such measures may include periodic reviews, adjustments to efficiency targets, or well-defined dispute resolution procedures.

Moreover, to mitigate the impact of fluctuations in energy prices, it is viable to incorporate into the agreement a fixed energy price. Under this arrangement, both the client and the ESCO establish the service value in advance, thereby shielding both parties from the effects of energy price changes. If the actual prices fall below the agreed minimum value, the consumer stands to benefit, compensating for any reduction in project returns. Conversely, should actual prices exceed the specified maximum, the project's returns surpass expectations, yet the consumer incurs no additional costs for the project. Essentially, this approach aligns performance with set physical parameters while maintaining fixed energy prices, resembling a guaranteed savings framework.

5.3.6. Project Finance

General description

Project Finance, particularly in the context of energy renovation projects, involves a structured financial arrangement tailored to mitigate risks and attract investment. Typically, a Special Purpose Vehicle (SPV) is established for such endeavours. The SPV operates as a separate legal entity, allowing for a non-recourse or limited recourse financing approach. This means that the financial liability of project investors is restricted to the assets and cash flows of the SPV, insulating them from potential losses beyond their initial investment.

In the realm of these projects, the SPV is responsible for aggregating and managing the project's financial resources, assets, and cash flows independently from the originating company. The SPV is often constituted by project stakeholders, including investors, lenders, and developers, who collectively capitalize on and control the entity.

Opportunities for social and affordable housing renovation

In energy renovation Project Finance, the creation of an SPV serves several purposes. Firstly, it helps isolate the project from the financial obligations of the parent company, enhancing risk management. Secondly, the non-recourse or limited recourse nature of the financing encourages external investors by assuring them that their liability is tied to the project's performance rather than the overall financial health of the parent company. This structure aligns incentives for project success and safeguards investors against unforeseen challenges, fostering a more attractive investment environment for energy renovation initiatives.

While restrictive regulations for public administrations in some countries have significantly constrained the use of these financial schemes and the creation of SPVs, there are several successful cases prompting consideration throughout the European Union. Despite the predominant focus on improving and renovating heating and cooling networks and installing PV panels at the district level, these cases serve as inspiration and are being studied for their comprehensive application in the energy renovation of social and affordable housing. A good example of a PPP is explained in Box 42 with the case of MES Barcelona.

Box 42: MES Barcelona: Driving the energy transition through public-private partnerships[155]

MES Barcelona (Barcelona Sustainable Energy Mechanism) programme, conceived and designed by the 2030 Agenda Office of the Barcelona City Council, exemplifies the determination of public administrations to join the private sector in the search for solutions to these energy challenges.

[155] https://media.iese.edu/research/pdfs/ST-0645-E

MES Barcelona is a public-private partnership project that uses the tool of co-investment by public and private actors, with the specific objective of facilitating the energy transition and long-term sustainable energy savings by promoting self-consumption of electricity, in households as well as in companies and public facilities, through the use of photovoltaic collectors that harness solar energy.

At present, the programme is at an early stage, in which there are still areas to be defined and room for learning and improvement by all of the actors involved.

An essential feature of MES Barcelona is that the returns it generates must be not only financial, but above all environmental and social. The project includes various schemes for co-investment by private and/or public entities, as well as other forms of investment. The most prominent example of a co-investment scheme is the creation of an SPV (special purpose vehicle) in which the city of Barcelona will be able to acquire a 30% stake.

By February 2023, the City Council had reached agreements with five approved investors to set up nine joint SPVs:

Six SPVs are for public, industrial and service buildings (€57.52 million of investment).

Three SPVs are for the residential market (€18.10 million of investment).

Together, these SPVs would represent an installed capacity of 87,23 MWp, for which the City Council will only have to invest €11.07 million (22,15% of the planned investment of €50 million).

The total investment will be €7.56 million, provided by the City Council (14,65%), approved investors (34,48%) and through SPV leverage financing (50,8%).

In terms of ESG impact indicators, these projects would deliver the following results:

Global warming: reduction of 28,618 tons per year of CO_2.

Health: reduction of 70,351 kg of PM10 per year.

Social benefit: €5,730,410 per year in avoided social costs.

Economy: 349 jobs created.

There are currently 17 approved investors, and agreements have been reached with five of them (Acelera, Atlas, EIDF, RUBAU and Sorigué).

The number of requests for information about the project (leads) has already reached 1,500 for buildings, the vast majority of which are residential. Information has been requested from 750 leads, and concrete proposals have been presented to over 100.

How to access

The success of Project Finance for energy renovation projects hinges on careful risk assessment, robust legal frameworks, and transparent contractual arrangements. Investors are attracted by the structured nature of SPVs, offering a dedicated vehicle for project assets and revenue streams, which, in turn, bolsters confidence in the financial viability of energy renovation ventures.

Establishing a SPV as a public administration involves a structured process to attract private capital. Firstly, the administration needs to conduct a thorough feasibility study to identify viable projects suitable for SPV financing. Once potential projects are identified, the administration should form a dedicated team of experts in finance, law, and project management to oversee SPV setup. The next step involves creating the SPV, which includes defining its legal structure, objectives, and governance framework. Lastly, effective communication and collaboration with potential investors through roadshows or engagement forums can help build confidence and garner private capital interest.

To attract private capital successfully, the public administration should focus on crafting an appealing investment proposition. This involves highlighting the economic viability and potential returns of the projects, ensuring a fair risk-sharing mechanism, and incorporating mechanisms such as revenue-sharing agreements. Engaging in partnerships with financial institutions or development banks can also enhance credibility and attract additional private investment. Additionally, adopting international best practices in SPV governance and financial management can instil confidence in potential investors. Regular monitoring and reporting mechanisms, combined with a commitment to project transparency, will further contribute to building trust and attracting the necessary private capital for successful SPV implementation.

6. Final word

The EU policy in relation to existing buildings aims at doubling the annual energy renovation rate. To achieve this objective, it proposes several actions, including **adequate and well targeted funding**. The additional investment required to achieve the objective is substantial (about 170 billion euros a year, just for energy renovations).

The average energy performance of social housing is better than the performance of the rest of the dwellings. On the contrary, private affordable housing, notably private rental housing, have substantial needs to improve their energy efficiency and their building infrastructures.

Financing plays a significant role to promote the energy renovation of buildings, but it needs to be accompanied by the other policy measures of the EU Renovation Wave, such as mandatory minimum energy performance standards for existing buildings or technical assistance to homeowners.

Owners of a large number of buildings generally have an easier access to finance and at lower cost than most homeowners. In addition, **large district-level renovations can reduce the cost of financing in relation to small building renovations due to scale effects**. The renovation of affordable housing owned by low-income homeowners is very challenging, as they have a limited indebtedness capacity. Therefore, grants are particularly relevant for low-income households to facilitate the financing of energy renovations.

The **availability of funding for energy renovations has substantially increased in recent years**, notably public finance. Public and private initiatives are mostly to finance energy renovations of buildings and only in a few cases are specific for social and affordable housing renovations.

A significant share of the EU budget for the period 2021-27 is earmarked to fighting climate change and developing climate finance is the main priority of the EIB. Member States have developed initiatives to provide financing for energy renovations of buildings, either based on EU funding or national funding. Although it is not possible to describe the initiatives in all EU Member States, the handbook briefly analyses the initiatives related to social and affordable housing renovation in four Member States. There are interesting initiatives at national level to facilitate the financing of the renovation of buildings, going from a guarantee fund for social housing, zero interest loans or the development of investment funds to finance energy renovation of multi-apartment buildings.

Public finance, notably from EU institutions, has pioneered the development of adequate financial products to finance energy renovations. The aim of these financial initiatives is to increase the amount of grants or subsidies available to finance energy renovations in buildings and related energy infrastructures, notably district heating/cooling networks. In relation of debt finance, the aim is to reduce the financial costs, lower guarantee or self-finance requirements and provide longer loan maturities. In addition, these public initiatives aim at mobilizing private finance for energy renovations of buildings, by combining private and public finance.

Many adapted finance products, public or private, for energy renovations exist, such as soft loans or de-risking tools; or specific products to finance some energy investments, such as for rooftop PV or district heating/cooling networks. The handbook points out the financial products more adapted to finance large owners of social and affordable housing or individual homeowners.

Green private financing has also significantly increased in recent years, as a result of specific policies to promote that financial institutions to develop green financing. These policies promote that financial institutions increase the share of green financing in their portfolio. Therefore, financing institutions are interested in financing energy renovations of social and affordable housing.

Most financial institutions have put in place specific financial products to finance building energy renovations and green energy production in buildings, notably rooftop PVs. There are

different financial products available on the market. Some are adapted to finance small energy investments, like green consumer loans, or large investments, such as green bonds.

Promoters of social and affordable housing energy renovations can benefit from the significant expansion of green financing in recent years, public and private, and of the development of specific financial products adapted to finance the energy renovation of buildings and related infrastructures. However, for this to be successful, it requires a coordinated call to action from all stakeholders involved in energy-efficient renovations for affordable and social housing. Aligning objectives and efforts among these stakeholders is key.

This collective call to action can mobilize efforts to improve housing conditions, advocate for inclusive policies, and address housing shortages. In order to meet these goals, the evolving landscape of affordable housing must be understood in terms of technological advancements, sustainable practices, and community-oriented development. This approach is essential to create a high-quality building stock that addresses the needs of the most vulnerable groups.

Many European projects and programs have been launched in recent years to further these objectives. Initiatives like the SHAPE EU project, which has drafted this financing guide to support social and affordable housing renovations, are part of this effort. Additionally, resources like the "Social Housing and Beyond - Operational Toolkit on the Use of EU Funds for Investments in Social Housing and Related Services," created by the European Commission, are also contributing to this progress.

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