



NAVARRE, A REGION SUPPORTING THE SUSTAINABLE ENERGY

Financial roadmap in Navarra for
investment in projects of energy
rehabilitation of rented social housing of
public buildings

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1 Introduction

The European Union through the new *EU Directive 2018/844* sets a new clear direction towards the decarbonisation of the European building stock by 2050. It further requires national governments to establish “long-term strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, both public and private”, for their transformation into highly energy-efficient and decarbonised real estates by 2050. The objective is for each Member State to establish a roadmap with action measures with the final aim, in the long-term, to reduce emissions greenhouse gases in the European space by 80% - 95% compared to 1990.

Furthermore, one of the amendments of the Directive 2018/844 refers to *financial incentives* for the energy efficiency improvement. Member States should link the incentive to achieved or planned energy savings based on criteria, such as the results of an energy audit or the comparison of energy efficiency certificates issued before and after an action. As the Directive says in paragraph 3 of its Article 2bis:

EU Directive 2018/844

Article 2bis

(3) To support the mobilisation of investments into the renovation needed to achieve the goals referred to in paragraph 1, Member States shall facilitate access to appropriate mechanisms for:

- a) the aggregation of projects, including by investment platforms or groups, and by consortia of small and medium-sized enterprises, to enable investor access as well as packaged solutions for potential clients;
- b) the reduction of the perceived risk of energy efficiency operations for investors and the private sector;
- c) the use of public funding to leverage additional private-sector investment or address specific market failures;
- d) guiding investments into an energy efficient public building stock, in line with Eurostat guidance; and
- e) accessible and transparent advisory tools, such as one-stop-shops for consumers and energy advisory services, on relevant energy efficiency renovations and financing instruments.

For this reason, the purpose of this document is to offer a global vision of the housing scenario at a European level. It is focused on rental social housing; analysing the existing demand, the need for retrofitting and the search for new financing opportunities for this type of actions, attending to the objective of decarbonisation and energy efficient public building stock, in line with Eurostat guidance, under a holistic and economically viable approach.

2 Policy context

Responsibility of housing, land use and urban planning have been transferred to Navarra, as autonomous region in Spain, under article 44 of Spanish Organic Law 13/1982.

However, despite having this transferred competence, Navarra is basically conditioned by national legislation.

Spanish housing and construction legislation below:

SPANISH HOUSING AND CONSTRUCTION LEGISLATION
Ley 49/1960 de Propiedad horizontal.
Ley 29/1994 de Arrendamientos urbanos.
Ley 38/1999 de Ordenación de la Edificación.
Real Decreto 235/2013 de 5 de abril, por el que se aprueba el procedimiento básico para la certificación energética de los edificios.
Real decreto legislativo 1/2013, por el que se aprueba el Texto Refundido de la Ley General de Derechos de Personas con Discapacidad y de su inclusión Social.
Ley 4/2013 de medidas de flexibilización y fomento del mercado del alquiler de viviendas
Ley 8/2013 de rehabilitación, regeneración y renovación urbanas. Esta ley introduce importantes modificaciones en la Ley de Propiedad Horizontal vigente, concretamente en los artículos 2, 3, 9, 10 y 17 en la Disposición Adicional, derogándose los artículos 8, 11 y 12.

3 Historical analysis of the housing policy in Navarra

Over the years, Navarra's housing policy has been developed. has developed a very extensive housing policy according to which the access to social housing has been promoted. In the same way, it should be noted how the developed policies have promoted the improvement of the existing building stock, highlighting the ratio of improvements in accessibility.

Such is the case that three housing plans have been developed, which are outlined below summarising their strategic lines:

PLAN 2001-2004	PLAN 2005-2008	PLAN 2008-2011
1. Social Housing	1. To promote the construction of new social housing according to satisfy the demand needs	1. Promotion of the available public land management for the construction of social housing
2. Rental social housing development	2. Promotion of social housing refurbishment	2. Creation of the Public Protected Rental System
3. The urban refurbishment and renovation	3. To obtain public land reserves	3. Adequacy to the needs of the protection system
4. Soil policy	4. To promote the subsidised housing quality	4. To boost the quality of subsidised housing and bioclimatism
5. To promote housing quality	5. To encourage the promotion of rental housing	5. To promote the Real State refurbishment
6. The promotion of bioclimatism	6. To take advantage of the empty housing stock	6. To take advantage of the empty housing stock
7. The improvement in information systems in housing and citizen care matters	7. To promote control and inspection measures	7. To favour the location of dwellings in the surroundings of the POT-3 (Comarca de Pamplona) in order to balance the territory
8. To optimise the use of the housing stock	8. To provide information on aid, regulations and citizen campaigns	8. To articulate a periodic information system on land and housing
	9. To articulate an information and cooperation system with social partners through a Housing Observatory	9. To improve information to citizens about aid, regulations, and calls for access to social housing
		10. To promote control and inspection measures

Navarra Housing Plan 2018-2028 has recently been published. The aim of this plan is to promote and enable actions in Navarra housing stock. In addition, the plan aims to channel and enable citizen participation in housing policies design.

The strategic objectives of the mentioned plan are collected below:

PLAN 2018-2028	
1.	Sufficient housing stock
2.	Affordable housing stock.
3.	Habitable and accessible housing stock
4.	To improve the social housing management in Navarra and optimise existing resources.
5.	To guarantee the social function of housing.
6.	Housing policies assessment - Coordination and networking.

4 General situation in Europe

The trend in the Member States of the European Union points to the tenure regime as majority, according to the source consulted [HOUSING FIRST](#). However, in general terms, in the last decade an increase of the rental demand compared to the house purchases can be observed.

Analysing the 2015 data, around 30% of the population resided in their own home with a loan or mortgage, and 42.9% did so in their own home without any type of loan or mortgage. Almost 20% of the population resided in a rental housing, of which 11% had a protected rental or free accommodation.

During the last years, European housing policies target on the one hand decreasing housing public spending and on the other hand, increasing private sector offer and encouraging housing tenure regime.

Moreover, Europe faces several increasingly growing problems, Today there's an increasing number of people experiencing homelessness and supply of social housing is ever falling behind compared to demand, and at the same time an increasing amount of middle-class households are getting/are increasingly exposed to increasing costs linked with housing. These trends require adaptation and innovation in the types of tenures that are offered and in the kind of contracts that regulate them.¹

¹ <http://www.housingeurope.eu/resource-1323/the-state-of-housing-in-the-eu-2019>

5 Spanish general situation

As mentioned above, Spanish majority regime is tenancy over rent. The clear tendency of Spanish Government to promote home purchase together with the economic crisis, concluded in noticeably higher property and rental prices. The immediately consequence is, for instance, non-affordable housing, especially for the younger population.

Availability and affordability of decent housing has become an important economic and social concern in Spain

From a demographic point of view, the Spanish population figures are declining due to the low birth rate.

As a result of the increased demand for housing by new family units and due to the scarcity of new developments, a commitment to change towards the rental regime is necessary. Due to low wages and the lack of private rental market supply, the request for social rental housing has increased in recent years. However, the rental social housing is not enough and the existing one requires renovation and adaptation to new energy needs.

In this context, the cost of renovation and the various schemes and mechanisms to finance it are determining factors in order to face both economic and social problems. Thus, new forms of financing in energy renovation projects in social rental housing will emerge from this report.

6 General analysis of the building stock in Navarra

Over the past few years, the housing stock in Navarra has grown to over 300,000 homes. It should be noted that the number of properties is greater in the Pamplona region than in the rest of the regions.

In recent years, the demand of rental housing reaching almost 13%. Once again, this demand is higher within central area of the region, where the capital, Pamplona, and its metropolitan area is.

During the crisis, the number of new social housing promotions has been reduced. In 2016, only 214 were started.

The majority of the public rental social housing stock in Navarra was built after 1980. In terms of energy efficiency, 1980 is a turning point due to Basic Building regulation on the Thermal Conditions of buildings (NB-CT-79) established in 1979. This basic regulation set up compulsory adding insulation in residential buildings. However, the buildings are not well insulated until 2013 when a new and strict building regulation (Basic building code- *Código técnico de la edificación-CTB*) was approved. Therefore, Navarra housing stock needs a clear renovation in terms of being more efficiency.

7 Mission, view and objectives

Mission

- The mission of the funding roadmap in energy renovation projects in social rental housing in the region of Navarra is to prioritise and plan the financing of energy renovation projects within the existing residential public stock.

View

- To ensure the progressive financing of Navarra housing stock renovation.

Objetives

- To analyse the public social rental housing stock of Navarra and its needs.
- To enable these already built environments to be more energy efficient, as well as its adpatation to climate change.
- To search for different sources of financing for energy renovation projects
- To disclose the renovation benefits.
- Awareness of tenants on new habits.
- To improve the comfort conditions of the tenants.
- To mitigate energy poverty.

8 Action points

<p>Point 1. Characterisation of the existing stock</p>	<ul style="list-style-type: none"> • Diagnosis of public housing under existing social rental system. • Analysis of existing needs.
<p>Point 2. Action's prioritisation</p>	<ul style="list-style-type: none"> • Definition of the indicators to describe the buildings type. • Definition of typological groups of buildings • Prioritisation proposal
<p>Point 3. Action's funding</p>	<ul style="list-style-type: none"> • Definition of existing financing sources • Financial scheme design
<p>Point 4. Communication and awareness</p>	<ul style="list-style-type: none"> • Study of misinformation of tenants • Definition of an awareness and sensitivity plan

9 Point 1. Characterisation of the existing building

One of the main aspects to take into account is that all Member States have been called to carry out the characterisation of their building stock.

Thanks to “*Diagnóstico sobre la vivienda en Navarra. Plan de Vivienda de Navarra 2018-2028*” report, the characteristics of our protected housing stock can be analysed. At January 2018, the protected housing stock in Navarra amounts to 56,000 homes, of which 31,593 have a limited sale price.

Viviendas 01/01/2018	Viviendas totales		Viviendas con limitaciones de precio	
	Nº	%	Nº	%
Libres, por el transcurso de 30 años	5.194	9,3%	0	0,0%
Protegidas, pero precio venta libre (han pasado más de 20 años)	16.790	30,0%	0	0,0%
Protegidas, pero sin precio venta libre (NO han pasado más de 20 años)	8.085	14,5%	8.085	25,6%
Protegidas, compra, 30 años de régimen	12.382	22,2%	12.382	39,2%
VPT, compra, 30 años de régimen	5.827	10,4%	5.827	18,4%
VPT, libres	2.318	4,1%	0	0,0%
VPP venta	382	0,7%	382	1,2%
Alquiler	4.917	8,8%	4.917	15,6%
TOTAL	55.895	100,0%	31.593	100,0%

It can be said that 68% are located in the region of Pamplona, with 38,149 protected dwellings. The area that comprises the axis of the Ebro has 10,651 protected dwellings.

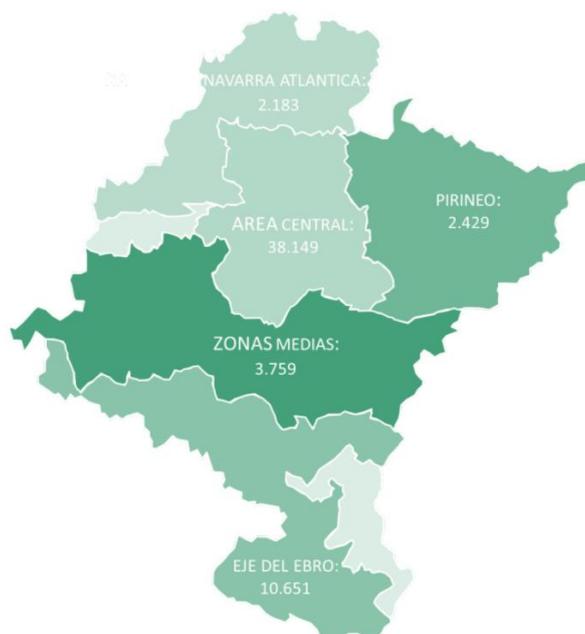


Illustration 1 Number of social housing dwellings

Within the *tenure regime*, the promotion of protected housing in the entire Regional Community has been devoted in the majority to the *purchase regime*. Therefore, the stock of protected rental housing only accounts for 8.8% of the protected dwellings in the region, despite the fact that demand in recent years has been increasing. It is made up of 4,994 homes, of which 633 follow a leasing scheme. There are 224 youth rental homes, 82 youth rental purchase homes and 6 supervised apartments. The Government of Navarra has 40 additional rental homes of its own located in Pamplona (4 dwellings), Villava (12 dwellings) and Zizur Mayor (24 dwellings). Rental housing accounts for 9% of the total protected housing stock, a somewhat higher proportion in the Ribera de Tudela region (11%) and in the Pamplona region (10%).

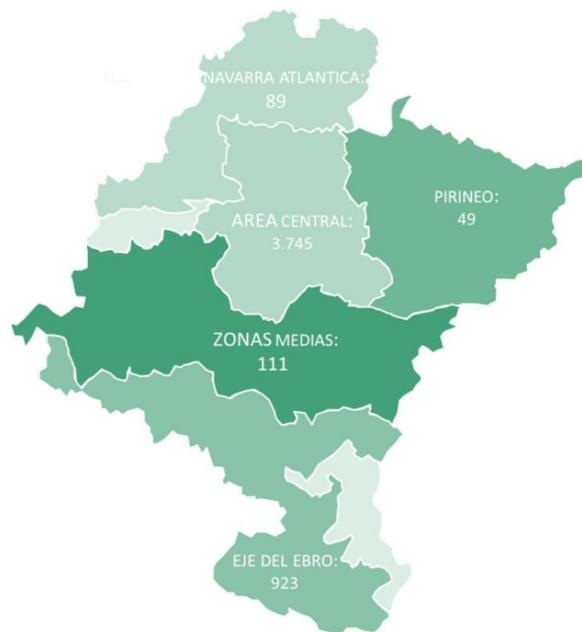


Illustration 2 Number of rental social housing

This public stock of social housing belongs to different agents. The Government of Navarra (three housing promotions) owns a minority part of these homes. There are also housing promotions whose owner is the public company belonging to the Government of Navarra, Nasuvinsa, these add up to approximately 1,000 homes. Among the public owners, local entities also have rental homes within their heritage, with approximately 500 homes. However, the vast majority of these housing promotions belong to private entities, amounting to approximately 3,500 homes.

For this reason, the residential building stock is facing characteristics who differ not only from the merely constructive, but also in the property regime and its legal and debt requirements.

We can affirm that thanks to *Decreto foral 25/2011, de 28 de marzo, por el que se regula el censo de solicitantes de vivienda protegida*, in Navarra, there is a single census of applicants for social housing. In addition, this Decreto foral describes the conditions of access to social housing, the functioning of the Census and the process of awarding it. Nasuvinsa, as an instrumental public company of the Government of Navarra, manages this census.

10 Point 2. Action´s prioritisation

After analysing the residential building stock, a prioritisation of actions for the execution of the construction civil works and their planning becomes necessary.

The first step to prioritise the actions consists in analysing the existing *building vulnerability*. Therefore, energy audits of buildings and their facilities are needed. These audits will address energy consumption and their energy ratings.

The second criteria of prioritisation is *social vulnerability*. Among other analysis data of social vulnerability, the age of the tenants and their incomes can be highlighted.

In this way, taking into account these two realities, building and social vulnerability, a *plan for prioritising actions* is established.

Thanks to the information collected to develop the aforementioned plan, the development of a virtual model using energy analysis software is proposed for its correct implementation.

11 Point 3. Action´s funding

The main question related to a sustainable energy project that a company, person or public administration has to answer is: *How can I finance my project?*

It is important to note that despite the fact that the benefits after energy renovation are more than known, such as the reduction of the energy bill, energy savings or improvement in comfort, the initial investment is more than significant in all cases. This is considerably increased when it is a single promoter such as the public administration that owns the property or properties.

To all this, another barrier is the lack of information about the available financing options or the resources and knowledge to apply the financing schemes. Furthermore, in the case of the public housing stock, there is no single agency or company responsible for the development of the project or the tender procedures. The lack of standardisation processes for these projects and the need of certifications and technical knowledge result in high cost operations, giving rise to the financial institutions not seeing operations as viable. For this, a long-term strategy for this type of investments is needed, making them gradually spread over time, making their viability possible.

Financial mechanisms for energy efficiency measures in buildings are supposed to contribute to achieving the overall objective of decarbonising the building stock. For this reason, when there are public aid plans or programmes to achieve these objectives, it is important that public entities clarify the requirements and specifications that the actions themselves need to achieve, asserting their own financial schemes. For example, some of the requirements which could be taken into account are the savings to be achieved, the CO₂ emissions to be reduced or the feasibility of the action.

11.1 Step by step guidance for the design of the financial scheme

The next steps should be considered as recommendations when designing a financial scheme that ensures its effectiveness. These offer a minimum checklist to take into account to guide policy makers or promoting entities during the selection process of the most appropriate financial mechanism, as well as its maintenance over time.

Step 1. To develop a pre-assessment

- To develop a first analysis to categorise the status quo and the market according to end users and possible existing barriers.
- What exactly is the purpose of the financial instrument?
- Who are the beneficiaries?
- What are the benefits of possible renovation?
- Building stock analysis.
- Existing legal framework.

Step 2. Available resources map

- To develop an overview of existing financial resources including an investigation of investment, the borrowing capacities of the regional / local government and the construction sector.
- What are the budget lines for energy efficiency?
- Would it be possible to transfer an amount of the budget for energy purposes?
- Debt capacity
- Available financing sources

Step 3. To search for inspiration of other member states.

- Active research for other types of financing applied by Member States.

Step 4. Outline design

- To establish the objectives and the main target groups.
- What is the building or groups of buildings to retrofit?
- How deep should the renovation be?
- What resources will be needed? Is there funding from the Local Administration or from the tenants?

Step 5. Triggerpoints identification

- Identification of the trigger points when the investment in energy savings is not feasible. For example, it is possible to combine several measures at the same time in different buildings.

Step 6. Revise the supply chain

- To verify that the supply chain can support the expected demand.

Step 7. Start with a pilot test

- To start with a pilot test before starting the entire operation.

Step 8. Ensure good communication

- To ensure good communication with the target audience, both at launch and in subsequent phases.
- To establish good communication between intermediary agents, either public or private, always attending to that condition.

Step 9. Prepare adequate resources for the operation.

- To establish a management plan for the necessary resources.
- To make sure the scheme is managed properly.
- To assess possible modifications in the organisational structure.
- Are new policies or adaptations of the existing legal framework necessary?

11.2 Summary of existing sources of financing

Investments in energy efficiency in buildings are a key point to meet the 2030 objectives set by the European Union. There are many financial schemes implemented by the Member States. However, many of them have encountered various barriers that prevent their correct execution. In fact, according to the *Energy Efficiency Financial Institutions Group ("EFFIG")* there is a huge need to scale investments and make use of financial instruments.

11.2.1 European Funding

11.2.1.1 European Structural and Investment Funds

More than half of the EU funds are channelled through the five European Structural and Investment Funds (ESI Funds), managed jointly by the European Commission and the EU countries.

1. European Regional Development Fund (ERDF)
2. European Social Fund (ESF)
3. Cohesion Fund
4. European Agricultural Fund for Rural Development (EAFRD)
5. European Maritime and Fisheries Fund (EMFF)

All of these funds are used to invest in job creation and a healthy and sustainable European economy and environment.

The ESI Funds are mainly concentrated in five sectors:

-  research and innovation
-  digital technologies
-  low carbon economy
-  sustainable management of natural resources
-  small companies

Within these funds, € 18 million for the 2014-2020 period have been earmarked for energy efficiency, especially for the European Regional Development Fund and the Cohesion Fund, of which € 13.4 million have been allocated for the energy efficiency measures in public and residential buildings.

The ERDF prioritises energy efficiency, smart energy management and the use of renewable energy in public and residential buildings. In addition, at least 5% of ERDF funds will be allocated at the national level in the field of development and employment within the theme of integrated actions for sustainable urban development.

11.2.1.2 ELENA- European Local ENergy Assistance

ELENA Mechanism aims at helping the authorities to act and think ambitiously developing projects in the field of energy efficiency and renewable energy that can later be replicated throughout the Member States of the Union.

The funds are used to provide technical assistance to local or regional authorities that want to implement their energy plans.

ELENA (European Local ENergy Assistance) financial programme was implemented by the European Investment Bank within the framework of the agreement with the European Commission. ELENA was initially established in 2008 under the Intelligent Energy-Europe (IEE II) programme and is currently funded under the H2020 Framework Programme for research and innovation.

The Mechanism supports project promoters in the form of grants to assist them in preparing substantially eligible investment programmes. This contributes to the achievement of the EU's energy and climate objectives by improving energy efficiency, reducing greenhouse gas emissions and increasing the use of renewable energy in energy consumption, as well as contributing to sustainable urban transport. The ELENA programme supports project promoters by covering up to 90% of the eligible costs necessary to prepare the aforementioned Investment Programmes. The support is conditioned on the mobilised investments, which means that the applicant is required to implement an Investment Programme proportional to the ELENA grant received.

The Mechanism aims at mobilising local, regional and national stakeholders towards actions leading to innovative solutions, including technologies, processes, products, policies, organisational models and practices. The objective is also to accelerate investments by increasing experience, facilitating financing and overcoming existing investment barriers

Priorities within the ELENA Mechanism:

1. Energy efficiency and renewable energy
2. Urban transport and mobility
3. Sustainable energy rehabilitation of buildings (*Smart finance for Smart buildings initiative*).

11.2.2 Regional funding programmes

The Government of Navarra, through the Housing Service, makes available to the Navarra's citizens non-repayable grant for buildings retrofitting. These grants are a budget line of the Navarra general budget. The beneficiaries of these grants are the promoters, namely the owners, the residents' association and/or the tenants with the authorisation of the owner.

In this way, the citizens of Navarra have a stable financial framework. The maximum amount to be received amounts to 40% of the eligible budget (maximum € 6,000 / home) or 50% in the case of Global Intervention Projects -GIP- (maximum € 7,500 / home). With the introduction

of the new urban figure called Global intervention project (GIP), actions are intended to encompass more than one residents' association, that is, projects that have a greater scope. These will serve as a reference for future works of the defined scope, also achieving an economy of scale.

11.2.2.1 Retrofitting Decree of aid 2020

Navarra's retrofitting regulation aims to support building, in order to be more efficiency. The beneficiaries must live habitual and permanently in these dwellings. In addition, they must be up to date with their tax obligations and their income must exceed a tenth of the protectable budget of the work

COMUNIDADES DE VECINOS: Supresión de barreras promovidas por la comunidad :	Años del edificio =>	Más de 25	
- Con total supresión de barreras, edificios sin ascensor : (Máximo 8.000€/vivienda, 10.000 si hay menos de 11 viviendas)		45%	
- Con total supresión de barreras, edificios con ascensor : (Máximo 5.000€/vivienda)		30%	
- Edificios sin ascensor, sin llegar a la total adaptación a la normativa de barreras : (Máximo 5.000€/vivienda)		25%	
- Edificios con ascensor, sin llegar a la total adaptación a la normativa de barreras : (Máximo 3.000€/vivienda)		20%	
- En Proyectos de Integración Global percibirán una subvención adicional de:		5%	
COMUNIDADES DE VECINOS: Mejora de la envolvente térmica promovida por la comunidad (Máx. 6.000 €/vivienda)		40%	
- Mejora de la envolvente térmica en Proyectos de Intervención Global (Máx. 7.500€/vivienda)		50%	
- Mejora de la eficiencia de instalaciones térmicas centralizadas adaptándolas al CTE-DB-HE-2 (Máximo 6,000€/vivienda)		40%	
- Anillado de la instalación de calefacción interior de las viviendas e instalación de contador (Máximo 3,000 €/vivienda)		20%	
SUBVENCIONES EXTRAORDINARIAS A PERSONAS FÍSICAS: (Máximo 12.000 € o 25.000 € en unifamiliares o Áreas de Rehab. Preferente)			
- Adaptación de vivienda de persona con discapacidad no menor del 40% e ingresos inferiores a 2,5 veces el SARA:		50%	
Promotores con ingresos entre 2,5 y 3,5 veces el SARA		40%	
- Promotores o cónyuges mayores de 65 o menores de 35 años, con ingresos inferiores a 2,5 veces el SARA:		45%	
Promotores con ingresos entre 2,5 y 3,5 veces el SARA		30%	
- Áreas de Rehabilitación Preferente: (Promotores-usuarios con ingresos inferiores a 2,5 veces el SARA)		45%	
Promotores-usuarios con ingresos entre 2,5 y 3,5 veces el SARA		30%	
- Familias numerosas.		5%	
Si son de categoría general, percibirán una subvención adicional de (3):		10%	
Si son de categoría especial, percibirán una subvención adicional de (3):		5%	
- Víctimas de terrorismo, violencia de género o perceptores de Renta de Inserción Social, según condiciones (3):		5%	
PROMOTORES PARA ARRENDAMIENTO: (Máximo 12.000 €/vivienda) Deberán destinarse al arrendamiento al menos 5 años desde la fecha de calificación definitiva.			
	Años del edificio =>	Más de 50	Más de 25
- En Área de Rehabilitación Preferente y renta mensual inferior a 5,62 o 5,31 €/m². (4)		40%	11%
Subvención máxima, por m² útil, hasta un máximo de 120 m² :		329,18 €	88,62 €
- En edificios con renta mensual inferior a 5,62 o 5,31 €/m² (4)		22%	11%
Subvención máxima, por m² útil, hasta un máximo de 120 m² :		177,25 €	88,62 €

Illustration 3. Granted action thanks to Navarra regulation.

11.2.3 Bank financing

Another of the recurrent possibilities in this type of intervention are the specific loans.

11.2.3.1 Specific loans

Recently, some banks are offering specific loans for the construction of sustainable dwellings or for thermal envelope energy refurbishment. In these loans, unlike conventional loans, the interest is lower and, in general, the repayment period is approximately equal to the return period based on the expected energy savings. Therefore, a verification of the energy savings obtained throughout the contract is usually requested.

11.2.4 Green bonds

Green bonds are any type of bond whose funds are used exclusively to finance or refinance, in whole or in part, eligible green projects, whether new and / or existing. Furthermore, they

must be aligned with the Green Bond Principles (GBP), which promote the integrity of the green bond market through guidelines that recommend transparency, publicity and reporting

Guaranteed bonds are debt alternatives supported by a set of assets or a guarantee offered by another entity, over which investors have preferential consideration when claiming their money. The issuance of covered bonds enables credit institutions to obtain a lower cost of financing. In recent years, green bonds have emerged, which give specific access to financing for sustainable energy projects and make it possible to check that sustainability standards are met.

11.2.5 Energy services Company (ESCO)

Energy service companies are entities that offer energy savings and economic savings through the implementation of an energy efficiency project. In this way, the end customer manages to reduce its energy consumption without having to face an initial investment that is beyond its reach.

The correct term comes from the English, Energy Service Company, ESCO. The complete and official definition of an ESE (in Spanish), dates of year 2006. Directive 2006/32 / ECA defines it as follows:

“Empresa de Servicios Energéticos: persona física o jurídica que proporciona servicios energéticos o de mejora de la eficiencia energética en las instalaciones o locales de un usuario y afronta cierto grado de riesgo económico al hacerlo. El pago de los servicios prestados se basará (en parte o totalmente) en la obtención de mejoras de la eficiencia energética y en el cumplimiento de los demás requisitos de rendimiento convenidos.”

In Spain, there is a public registry of energy services provider according to Royal Decree 56/2016. This registry is centralised by IDAE, but companies that want to be part of it must register themselves in the Autonomous Community where they have their registered office.

There have been numerous attempts to launch financing with an ESE and a public entity. However, due to the principle of public debt, they have not been carried out. The Maastricht Treaty and EUROSTAT define public debt as the gross consolidated debt of public administrations in nominal value, the current liabilities of the public administrations within the following accounts: foreign currency and deposits, debt securities and credits.

In this sense, the energy services contract (EPC) under an operating lease scheme would be the only financing scheme that would not count as public debt, since the ESCO assumes all the risk of the investment, including its financing.

An example of innovative public contracting for energy efficiency services would be *Modelo de contrato de rendimiento energético con ahorros garantizados de la Generalitat de Cataluña*.

11.2.6 Rental fees

In the case of social rental housing stock, the option exists of financing part of the works through the rental fee itself. This requires estimating a rental amount in which part of it is destined in future years to the renovation works that are required to be done. The aim is to generate a cash flow to be exclusively used in this type of works.

11.2.7 Other strategies for the project financing

One of the most important barriers when obtaining financing is the lack of volume or the lack of standardisation processes.

11.2.7.1 Projects' aggregation

In some cases, the investments to be made are placed in different locations, which makes difficult their valuation and increases the evaluation and transaction costs. For this reason, in some territories the competent Public Administrations are grouping together several small or medium-sized investments to achieve scale economies and reduce the transaction costs of all projects.

For example, actions are grouped in public or private buildings that require energy renovations, with the aim of reaching a sufficient volume to obtain better economic conditions in the execution of the works.

12 Point 4. Communication and awareness

The objective of this point is to make aware tenants about energy renovation. The aim of that is to generate a demand for retrofitting, making the general public aware of the benefits of energy retrofitting.

The aim is to create a tenant society demanding sustainable dwellings. In this sense, it is necessary to boost an easy understanding communication plan among the tenants.

In addition, the aim of this point is to ensure that the public effort to be made is in accordance to the end users' benefits to be obtained, and of course, to the effectiveness of the decarbonised action to be taken.

Finally, the aim is to encourage the user to adopt behaviours in line with all those habits that generally benefit the reduction of greenhouse gas emissions into the atmosphere

Different phases are proposed to achieve the objectives described above:

Phase 1. Initial Diagnosis

- Analysis of the current situation of tenants
- Tenant surveys
- Generation of indicators
- Analysis of energy poverty cases

Phase 2. Implementation and monitoring

- Installation of electrical, thermal and comfort monitoring and measurement equipment within each of the dwellings.
- User training through different workshops and accompaniment on the efficient use of energy in their homes.
- Analysis of energy bills and training in their understanding.
- To provide active solutions that facilitate efficient energy and resource management.

Phase 3. Evolution and assessment

- Performing an analysis of the evolution of user behavior and habits based on the improvement introduced
- Comparison of the results obtained with the initial situation.

13 Calendar

Point 1. Characterisation of the existing stock

Point 2. Action's prioritisation

Point 3. Actions' funding

Point 4. Communication and awareness

14 Conclusions

Thanks to this report, conclusions can be drawn, which are set out below.

Before designing a financial scheme, it is important to analyse the political and legal framework and make sure that the financing scheme fits within the long-term strategic plans.

The design of a successful financial scheme for this type of works requires an initial analysis, definition of the objectives and analysis of the existing barriers in the financial field, existing market, political, legal, behaviour and of course, the technical barriers of investing in sustainable energy projects. A good starting point is to establish a ranking of existing barriers and to carry out a general analysis of good practices, studying the main barriers that have been faced. In addition, it is important to have technical support when developing the tender processes, as well as the development of guides for end users and the necessary training of the sector.

In the same way, it is necessary to support access to financing by carrying out a proactive marketing and communication strategy tailored for the final beneficiaries.

Finally, it is highly recommended to encourage deep renovations that fit the long-term objectives of the residential sector that seek the decarbonisation of the European building stock by 2050. It seeks to ensure the high technical quality of the renovations, in addition to ensuring the effectiveness of investments in the long term, developing a monitoring system that allows comparing the results once the works have been carried out.



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