

NASUVINSA – ENERGY EFFICIENT SOCIAL RENTED HOUSING IN NAVARRE

October 10, 2017

First of all, on behalf of Nasuvinsa, I would like to thank the organization for the opportunity to present the project of energy efficient social rented housing, which we are currently developing in Navarre.

SLIDE 1

As I have mentioned, our project is being developed in Navarre, Chartered Community located in northern Spain.

1. It borders French Pyrenees-Atlantiques Department in the north, Aragon in the east and southeast, La Rioja in the south and Basque Country in the west.
 2. The community comprises 272 municipalities and has a population of 640.000 people, where approximately one third of people live in the capital, Pamplona (197.000 inhabitants), and more than a half in the metropolitan area (330.000 inhabitants).
-

CLIMATE

It is essential to take into account the type of climate in our region to understand the necessity of construction energy efficient homes.

Navarre is influenced by a mixture of mountainous Pyrenees and Mediterranean Ebro Valley, which creates a great difference of climate in the north (significantly more humid and with frequent precipitations), and the climate in the south (more Mediterranean and with higher temperatures and occasional precipitations).

Navarre can be divided into 4 zones:

- Northwest Zone

Its climate is marine, mainly mild and warm, with heavy rainfalls and mists and no temperature jumps. The annual average temperature fluctuates between 8.5 and 14.5 °C.

- Alpine Zone

This area of Navarre has a humid, rainy and cold continental climate. The average annual temperature varies between 7 and 13 °C.

- Intermediate Zone

It corresponds to a pure Mediterranean climate and the annual average temperature varies between 11 and 14 °C.

- Ebro Valley

The climate is mild Mediterranean with occasional rainfalls and strong wind. The annual average temperature is around 14 °C.

SLIDE 2

RENEWABLE ENERGY

Navarre is the European leader of renewable energy consumption. In 2006 seventy percent of its energy was produced from renewable sources.

Its experience is considered by numerous countries and regions as an example of the use of this type of energy, especially because of the large number of wind farms that generate most of the energy consumed.

In addition, the headquarters of NCRE (National Center of Renewable Energies) are situated in the metropolitan area of Pamplona. Besides, a testing laboratory of wind turbines, regarded by the same institution as the most complete in the world at the time of its construction, is located in Sangüesa.

NAVARRRE IN TERMS OF PROSPERITY

In 2017, Standard & Poor's holds Navarre's rating to 'A' two levels above Spain's rating (BBB+): Navarre's economy is wealthier and more competitive than Spanish one.

SLIDE 3

Nasuvinsa is a public company controlled by the Government of Navarre and established to serve Navarrese citizens.

Its activity is very diversified and developed in the following areas:

- Social housing policy
- The boost of economic activity
- Territorial strategic planning

As part of its activity related to housing, Nasuvinsa has experience of almost 30 years in construction and management of social housing, with more than 7,000 objects built, 14% of which are for renting.

At the moment, it manages 1,500 rental housing units, where 1,000 objects are owned by the company and 500 objects belong to private owners, who delegate their rental management to Nasuvinsa.

The experience developed over the years and the knowledge gained by the direct management of the social housing applications, allows us to know the real demands of the Navarrese society in relation to housing and adopt appropriate strategies to respond to those needs.

This can show us today a society with a strong demand for social rental housing; a society, which continues to suffer from the effects of the crisis and which, as a consequence, suffers from severe energy poverty; a society that has serious difficulties when it comes to being able to face daily expenses of its house (mortgage, rental payments, heating ...)

SLIDE 4

The crisis has intensified the so-called "energy poverty". Thus, the number of homes that are cold in the Chartered Community increased by two from 2007 to 2012. To be more exact, around 18,500 homes (7.7%), stated in 2012 that they didn't have a sufficiently warm temperature during winter months.

The homes most affected by the lack of heating were those with a net income of less than 15,000 euros (25.6%).

Income <€ 15,000 25.6% of homes are affected by lack of heating.

Income € 15,000-28,000 16.3% of homes are affected by lack of heating.

Income > € 28,000 10.80% of homes are affected by lack of heating.

It has to be noted that the most vulnerable groups are young and elderly people, since living in a place, where habitual temperatures are inappropriate (below 18 degrees Celsius in winter), increases the risk of **respiratory and cardiovascular diseases**.

According to the Association for Environmental Studies and Sciences (AESS), the number of Spanish people who may be at risk of energy poverty increased by 2,000,000 from 2011 to 2012. The reasons for this increase are:

- **the increase of electricity bills** (60% since 2007)
- **the decrease of family income** since 2007 (8.5%).
- **quality of housing**: most of the buildings in Spain were built without taking into account energy efficiency criteria.

Parallel to these needs and realities there is a normative plan that regulates and defines the procedures, according to which buildings should be constructed, to meet quality standards, guarantee minimum living conditions and be energy efficient.

If we join the abovementioned needs of society with the current and future normative demands, we will obtain a field of work, where the great beneficiary is **a citizen, who will be able to:**

- **access to decent housing**
- **live in a comfortable way**
- **have limited energy costs.**

SLIDE 5

Distribution of subsidized rental housing in Navarre is carried out through the Census of applicants, currently managed by Nasuvinsa under the guidance of the Government of Navarre.

In order to be obtain a subsidized rental housing unit, the tenant must meet certain requirements (depending on his/her annual income) and will be given a score in a range of a scale established by the Government of Navarre.

The distribution of the dwellings is done according to the score obtained by each applicant of the 'Unique Scale of Access to Renting'.

Regional regulations set a number of subsidies depending on income.

Currently there is a census 'waiting list' of **4,013 people** who need rental housing.

The Beneficiary (tenant) profile of the 'Rental Housing Plan' was created according to the characteristics of the tenants who are currently occupying a rental housing unit of Nasuvinsa:

Beneficiary Profile:

70% of the Nasuvinsa tenants have incomes below 13,000 € / year and receive some type of subsidy.

50% of tenants have annual incomes less than € 7,455.14 / year.

50% of the tenants with access to aid from the Government of Navarre, have a subsidy of 75% of rental costs.

Therefore, these are mostly families with limited economic resources who will have difficulty allocating part of them to pay for the renting or heating of their home.

SLIDE 6

To meet the demands for social housing, Nasuvinsa has launched a Rental Housing Plan of Nearly Zero-Energy Building (NZEB).

It is planned to build 524 social rental housing objects with an estimated cost of around 80 million euros, 50% of which will be financed by the European Investment Bank.

Construction of the first phase of the plan (185 units) will begin in November this year, while the second phase (339 units) will begin its construction in June 2018.

The objective of the Plan is to satisfy the actual demand for rental housing with NZEB objects that meet the regulatory requirements foreseen for year 2020 in Navarre.

We have to take into account The Energy Performance of Buildings Directive 2010/31:

The main requirements of these regulations are those relating to the implementation of NZEBs (Near-Zero Energy Buildings) in close future, starting from 31 December 2020 for all new buildings and from 31 December 2018 for all new buildings that are occupied and owned by public authorities.

At the moment, there is a specific definition of an NZEB (Near-Zero Energy Buildings) in national legislation.

That definition should include the following concepts:

- Isolation
- Thermal bridges
- Mechanical ventilation with heat regeneration
- Airtightness
- Energy efficient finish carpentry

All these criteria are defined and limited by the Passivhaus standard.

That is why Nasuvinsa will build all the houses under its Social Rental Housing Plan according to the Passivhaus standard.

This way, the abovementioned houses will comply with the requirements that will come into force in 2020.

SLIDE 7

I have previously described the profile of the tenant who are provided with the social rental housing unit by Nasuvinsa.

It is usually a tenant of low socioeconomic level with limited economic resources.

Our experience in the management of rental housing over the years shows that in winter periods most of our tenants **do not use the existing heating system** at home or make limited and insufficient use due to their inability to cover the related expenses.

As a consequence, to prevent the loss of warmth at home, the tenants **do not ventilate it**.

This practice provides uncomfortable living conditions to our tenants in terms of energy and indoor air quality.

In turn, and as a result of what has been explained, there can be **pathologies inside the house** (condensation ...) that affect health of tenants and the useful life of the property.

These **pathologies** have a significant economic impact on the **maintenance costs assumed by Nasuvinsa (1.000.000 € / year)**.

In view of the above, it should be added that, indirectly, the heating expenses taken by the tenants often provoke them to stop paying the monthly rent of the dwelling (since they do not have the economic resources), which results in **an increase of delinquency in Nasuvinsa**.

Therefore, it is fundamental for Nasuvinsa as a public company to construct new buildings for renting, which are energy efficient and of almost zero consumption.

This way we will make homes much more comfortable and have very low energy costs for our tenants, which will considerably reduce the risk of pathologies and thus the cost of maintenance.

In turn, tenants can meet the payment of their rental by reducing heating costs of their property, which will also decrease the delinquency rate of Nasuvinsa.

If we compare the heating consumption of a 30-year-old house and a house built today, which complies with current regulations, we can have 55% of savings.

If we compare it with a house built under the Passivhaus standard, the savings will increase to 90%, with an estimated annual heating costs of € 105.