



Navarra constructs over 500 energy efficient homes for social housing

Government: Navarra, Spain

Region: Europe

Sector: Energy efficiency

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Summary

The region of Navarra is building over 500 nearly zero-energy building (NZEB) units to provide affordable and energy efficient homes for their citizens.

Nearly zero-energy buildings have very low energy consumption due to their design and the materials used in their construction and reduce energy consumption by 75% compared to standard buildings. The project will also contribute towards social integration and urban regeneration through the provision of affordable rental housing.

With a €40 million loan from the European Investment Bank, [NASUVINSA](#), the public agency responsible for urban development and social housing projects in Navarra, will manage the construction of 78,000 square metres of housing over the next three years.

Enabling conditions

This project simultaneously addresses two of the region's problems.

Firstly, it fulfills the region's requirement to make their housing stock more energy efficient due both national and regional regulation. On a national level the Technical Building Code approved in 2013 includes energy regulation for newly constructed and refurbished buildings. In Navarra, the regional government established higher energy efficiency standards, as well as a minimum requirement of solar energy use for hot water and electricity for social housing.

In addition, the updated EU's [Energy Performance of Buildings Directive](#) requires all new buildings to be nearly zero-energy by the end of 2020. The gradual implementation of changes to meet this regulation is expected to lead to considerable energy and financial savings, and this project is an opportunity to demonstrate these environmental and economic impacts.



Secondly, the project meets the demand for rental housing that addresses energy poverty issues in Navarra. NASUVINSA has detected that a considerable percentage of the local population suffer from energy poverty in rental properties, causing health problems and significant repair costs. There are almost 4,500 people in need of rental housing, so providing citizens with sustainable and energy efficient homes is high priority. Therefore, the regional government is also supporting the project financially with a 25% subsidy of the value of the investment for any property developer that will be involved or commissioned for the project.

Expected results

The energy savings are estimated to be 2,298.3 MWh/year of primary energy (a 75% reduction against the baseline), corresponding to savings of 748.8 ton CO₂/year once the project is completed. Other expected results include:

- 90% reduction in the cost of heating
- Reduction in maintenance costs of buildings
- Use of renewable energy for heating
- Further energy use reduction due to behavior change (training provided to householders on the use and maintenance of their new homes)
- Improved indoor air quality through the monitoring of interior and exterior temperature, indoor relative humidity and CO₂ concentration levels
- Employment of approximately 700 people during the period of implementation

Challenges

According to NASUVINSA, the biggest challenge is the training of builders, engineers and architects to ensure the standards for Nearly Zero Energy Buildings are met.

Key lessons learned

- It's important to demonstrate the need in the real economy for low energy demand buildings and combine the narratives around energy poverty and the supply of affordable rental housing.
- To speed up the approval of the loan, it's crucial for a public company such as NASUVINSA to be involved to show the expertise in construction but also a close relationship with the government.

More information

For more information on the project, visit [here](#).

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