



IN PARTNERSHIP WITH



CITY CASE STUDY

COUNTRY	POPULATION	EMISSIONS IN 2014	MITIGATION GOAL
FRANCE	242,000 HABITANTS	1.91 MTCO ₂ E	-75% IN 2050 (1990 BASELINE)

Angers • EnergieSprong, an industrialized zero-energy renovation project, a lever for mass uptake

To contribute to carbon neutrality in 2050, French construction actors will have to transform the majority of the housing stock to achieve an average Energy Performance Certificate (EPC) level of "B". Compensating for buildings that cannot achieve this, and to raise the overall ambition, ultra-efficient renovations make it possible to reach energy consumption levels close to zero (EPC "A") wherever possible. The EnergieSprong approach, initiated in the Netherlands in 2012, assists the development of projects allowing for mass uptake of renovations that target an "E=0" performance goal: a house producing as much energy as it consumes after renovation. These projects use prefabricated solutions to make rapid renovations possible.

Collaboration of a large number of local actors

In recent years, the Pays de la Loire region has developed an ecosystem committed to developing ultra-efficient renovations. Among the various projects, the social landlord Podéliha has initiated the renovation of 32 homes in the city of Angers to showcase the possibilities offered by the EnergieSprong approach. A team of architects, engineering offices, local associations, and building and public works companies has been assembled specially for the project. Their collaboration makes for a [project](#) with a new ambition, which aims to continue integrating new businesses and local associations into the group to improve their domains of expertise, to enhance their local presence, and to promote the development of the local economy. One of the key factors in the success of this project has been the support it received from local authorities and centres of expertise (Novabuild, Atlansun et Fibois Atlantique) as well as EnergieSprong France.

High requirements to target energy excellence

Podéliha has drawn up rigorous specifications for itself, with results-based targets. It is divided into 4 areas of activity: (1) achieving "zero energy" levels in housing,

guaranteed for 30 years after renovation, thanks to a high level of energy efficiency and the local production of renewable energy; (2) funding the additional costs through energy savings, avoiding future investments and selling renewable energy over 30 years thanks to the long term performance guarantee; (3) quickly completing work on occupied sites, thus limiting the nuisance for the occupants thanks to off-site prefabrication; (4) paying particular attention to comfort, aesthetics, and architectural quality.

Results that go beyond energy efficiency

The positive actions for energy and the environment have been achieved through multi-actor collaboration, consultation with residents, and allowing companies the freedom to choose the means they deploy. The prefabricated facades incorporate bio-sourced elements, in particular wood and cellulose wadding. These materials, while being easily adaptable and industrially producible, also ensure architectural diversity, and have durable and resilient properties.

By involving residents throughout the project, this renovation opens up new practices that maximise the benefits of the undertaking: implementation by an association of collective workshops, involvement of residents in decision-making,

and provision of individual support to manage consumption.

EnergieSprong, a forward-looking approach in Pays de la Loire

The technical, social, and environmental achievements of this project to renovate 32 detached houses have sparked enthusiasm among all players in the region. Political leaders, local authorities, local businesses and social landlords have carefully observed this full-scale test in order to learn the lessons necessary for the rapid upscaling of renovation projects. Thus, seven social landlords united to form a regional centre for pooling purchases (MASH, *Mutualisation des Achats au Service de l'Habitat*), and joined forces to deploy the EnergieSprong approach [at a larger scale](#). They have committed to set more than 1,500 homes on the path to zero-energy renovation. This strong signal sent to local players, but also to other national and European regions, represents progress towards meeting the building sector's climate commitments.