

Economic development: support locally economic sector towards sustainability and develop new green economic sector

A local project to support building sector

Nantes Métropole and the Local Employment House are engaged in a national project to improve skill building worker in a perspective of green growth "Sustainable development of building sector and renewable energies " launched by the French Environment and Energy Management Agency – ADEME- and Employment and Cities Alliance – AVE.

National context: the energy building performance is increasing in France with national energy standards "RT", but a barrier is today identified: the building energy performances depend today for a large part of worker practices.

Locally, a consortium composed by nearly 40 partners has elaborated an action plan to accompany the building sector in a sustainable way.

A key action "direct observatory" has been implemented to understand the professional practices. Technical results has been translated in terms of skills and employment

The "Direct observatory" action concerned existing and new buildings. The regional office of the French Buildings Federation and a social housing operator "Nantes Habitat" have provided construction sites.

Two experts have been selected to implement this observation: SCE engineering for the technical part (supported by Nantes Métropole) and AFPA consultant for skills part (supported by DIRECCT)

Observed new building projects – Villavenir + Atlantique – FFB 44



Wood project

Project ownership: SCI VILLAVENIR ATLANTIQUE
 Representative company: CRUARD CHARPENTE sa
 Architect: ALTERSMITH
 Energy engineering : POUGET CONSULTANTS

2 adjoining detached wood house
 Energy performance: energy positive house RT 2020
 High insulation + renewable energies



Metal project

Project ownership: SCI VILLAVENIR ATLANTIQUE
 Representative company: ateliers DAVID
 Architect: FLAHAULT DESIGN Pierre Edouard Chenet
 Energy engineering : ISOCRATE

2 adjoining detached metal house
 Energy performance: energy positive house RT 2020
 High insulation + renewable energies



Masonry project

Project ownership: SCI VILLAVENIR ATLANTIQUE
 Representative company : Groupe énorA
 Architect: MAGNUM
 Energy engineering: POUGET CONSULTANTS

2 adjoining detached brick and concrete house
 Energy performance: energy positive house RT 2020
 High insulation + renewable energies

Observed existing building projects – Nantes Habitat



Masonry project

Project ownership: NANTES HABITAT
Representative company : Quille construction
Architect: Cabinet Nomade architectes

Retrofitting of a social building from the fifties (176 dwellings)
High insulation + connection to the heating urban network

Result

TECHNICAL PART

Good and bad practices have been observed in each construction site. The technical analyse shows that old fashioned professional practices reduce the building energy performance especially for the masonry project. Concrete houses represent the main part of the French housing park. Wood and metal sector present a higher energy performance due to a global industrial approach including material application. The pre construction housing component is a real advantage to guaranty the energy performance.

Good practices



Walls inside the house is separated from the exterior wall

Bad practices



Walls are damaged by construction clamp

SKILLS AND EMPLOYMENT PART

The technical analyse demonstrate that today is important to change the traditional construction culture in innovation culture. The wood and metal sectors applied industrial management which contribute to reduce the impact of material application in the energy performance. A “lead management” approach could be applied to all construction sectors. In parallel, workers will be formed directly on sites.

Perspective

The energy transition in the buildings sector depends to the capacity to act at each level with many actors: national, sub national and local level. After the ADEME & AVE project, Nantes Métropole and the Local Employment House wish participate at a regional program to improve skills of local workers. The Local Employment House will work especially on the attractiveness of building sector.