

SUSTAINABLE CONSTRUCTION AND RENOVATION

Background: Worldwide, the construction, use and renovation of houses accounts for about half the energy consumption. In Europe, heating rooms and water accounts for most of the energy used in housing. Fossil fuel and gas are the most frequently used energy sources. Therefore construction and renovation have a large en-

ergy reduction potential. But for many municipalities the transition to a new sustainable and energy-efficient way of building is a major challenge. With the MountEE project – sustainable public buildings, three European mountain areas show how it works.



Photo: Municipality of Mantet

TOWN HALL MANTET

WHAT

The small village of Mantet (28 inhabitants) wants to renovate an old barn, located at the entrance of the village, in order to create a meeting place for the population, which also could welcome some training courses (yoga, pottery...) and events. As the core of the village's animation, this building must be exemplary. The municipality then decided to build in a sustainable way, despite the numerous difficulties (snow slide risk, seismic risk, will to reconcile the preservation of the heritage character of the existing building and the energy efficiency...).

FACTS

Type of building (use) // Town Hall

Year // start in autumn 2015

Size // 190 m²

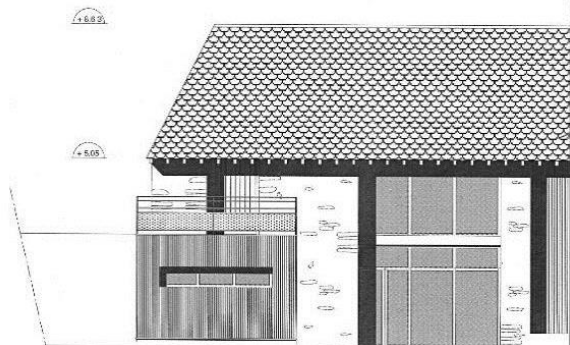
Investment // 467.000 €

Energy demand // 166 kWh_{ep}/m²/an

Renewable Energy // Wood stove

Ventilation System // Double flow ventilation and Canadian well

Building material // Cellulose wadding, local wood structure, stone



HOW

The service package has accompanied the project ownership since the beginning, in order to define sustainable targets, according to the will of the municipality. At each step (choice of the project management, conception...), the MountEE team has been there to make the project management take into account the sustainable goals defined during the preliminary planning. A specific work has been made concerning the preservation of the architectural character of the existing building. The solution found implies the building of a wooden box inside the barn, to reinforce the structure, and the use of local materials.



LESSONS LEARNED

The service package has been widely used, beyond the sustainable aspect, because small municipalities have no experience at all. The capacity building of the project management was also absolutely necessary, especially regarding the sustainable aspect of the project, beyond the energy efficiency. Without MountEE, it would have been very difficult to take into account the sustainable targets defined during the preliminary planning. Above all, the huge motivation of the project ownership has made a difference. Its perseverance will make the project a reality.



CONTACT

Mantet
66360 Mantet
T +334 68 05 71 11

SERVICE

More information on the project MountEE and its pilot buildings: www.mountee.eu

Funding Programme



Co-funded by the Intelligent Energy Europe
Programme of the European Union



About MountEE In accordance with the Energy Performance of Buildings Directive of the European Union (EPBD), all new constructions and existing buildings undergoing major renovation will have to meet Nearly Zero Energy Building standards (NZEB) by 2018. For many municipalities, especially in mountain regions, the transition

to NZEB is a major challenge. The MountEE project supports municipalities in three European mountain areas – Sweden, Alps and Pyrenees – in achieving the NZEB objectives, and will help to transform them into front runners. In six regions public buildings are renovated sustainably and energy-efficiently.



SUSTAINABLE CONSTRUCTION AND RENOVATION

Background: Worldwide, the construction, use and renovation of houses accounts for about half the energy consumption. In Europe, heating rooms and water accounts for most of the energy used in housing. Fossil fuel and gas are the most frequently used energy sources. Therefore construction and renovation have a large en-

ergy reduction potential. But for many municipalities the transition to a new sustainable and energy-efficient way of building is a major challenge. With the MountEE project – sustainable public buildings, three European mountain areas show how it works.



Photo: PnR

OFFICE BUILDING OF NATIONAL PARK

WHAT

The new PnR-offices are situated in a renovated traditional building, in the medieval and industrial site. The buildings serves as showcase for sustainable renovation in the area therefore the targets are high energy efficiency and use of renewables, the use of local and eco-materials, a "clean-construction site" process and preservation of the bats living on the construction sites.

The architectural competition has been won by INCA/Betom, which has designed the project.

FACTS

Type of building (use) // office, administrative building and public reception

Year // 2014

Size // 764 m²

Investment // 2.9 Mio €

Energy demand // 62 kWh/m²/a

Renewable Energy // Wood chip heating

Ventilation System // Double flow ventilation for offices, simple for sanitary installations

Building material // Cellulose wadding, local wood, local slates, stone



HOW

In order to build an exemplary project, a High Environmental Quality (HQE) process has been implemented since the preliminary planning phase.

The service package MountEE has been implemented after the conception of the project, during the call for tenders to select the craftsmen. MountEE has then been used during the construction phase, to verify the achievement of the sustainable targets defined at the beginning of the project (type of materials, efficiency, waste management).



LESSONS LEARNED

The multiplicity of stakeholders made the intervention of the service package very difficult. This is also due to the fact that MountEE has not accompanied the pilot since the beginning of the project. An earlier intervention, since the planning phase, would have made easier the achievement of the sustainable goals. The project management and the craftsmen need to be coached at every moment by the service package to ensure the implementation of the sustainable choices made by the project ownership. Indeed, the project management was facing the usual difficulties of a building project, and the sustainable character of the project was not their main concern.



CONTACT

Parc naturel régional des Pyrénées catalanes
La Bastide
66360 Olette
+334 68 04 97 60
contact@parc-pyrenees-catalanes.fr

SERVICE

More information on the project MountEE and its pilot buildings: www.mountee.eu

Funding Programme



Co-funded by the Intelligent Energy Europe
Programme of the European Union



About MountEE In accordance with the Energy Performance of Buildings Directive of the European Union (EPBD), all new constructions and existing buildings undergoing major renovation will have to meet Nearly Zero Energy Building standards (NZEB) by 2018. For many municipalities, especially in mountain regions, the transition

to NZEB is a major challenge. The MountEE project supports municipalities in three European mountain areas – Sweden, Alps and Pyrénées – in achieving the NZEB objectives, and will help to transform them into front runners. In six regions public buildings are renovated sustainably and energy-efficiently.

