



Residential Building in Algeria

Design and construction of a rural pilot house with energy efficiency

Consortium Partners

Centre National d'Etudes
et Recherches Intégrées
du Bâtiment,
CNERIB

Centre de
Développement des
Energies
Renouvelables, CDER



The purpose is to build a rural pilot house with energy efficiency in the frame of the Algerian government program (1.200.000 houses, 500.000 rural houses)

The main energy concept of the pilot project is:

- Use of local construction materials, mainly the stabilized earth blocs, obtained by a mixture of earth and a weak ratio of cement (less than 5%) which are very economic (no energy consumption for extraction; in more cases, the foundation soil can be used,...) and having a high thermal and acoustic quality,

- Horizontal and vertical optimum thermal insulation of the house (16 cm of EPS in the roof, 9 cm of EPS in exterior walls and 6 cm of PSX in the ground floor),

- Adequate orientation of the windows,

- Use of natural light,

- Use of low energy consumption bulbs,

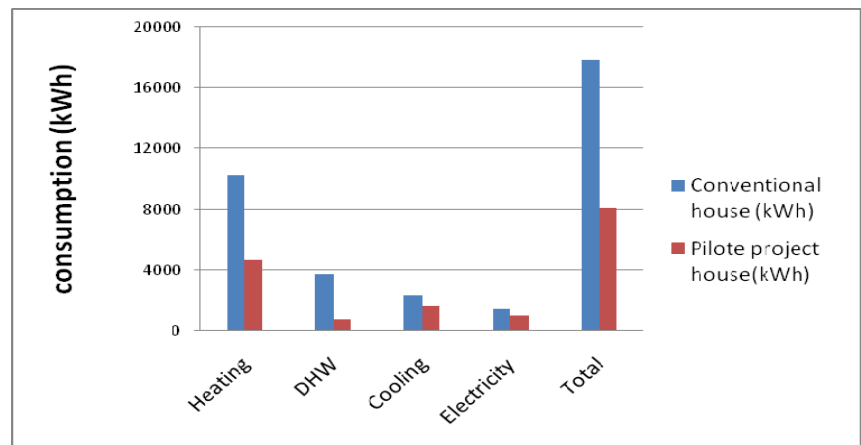
- Use of solar energy to generate domestic hot water and to heat the house through the floor,

- Use of summer shading,

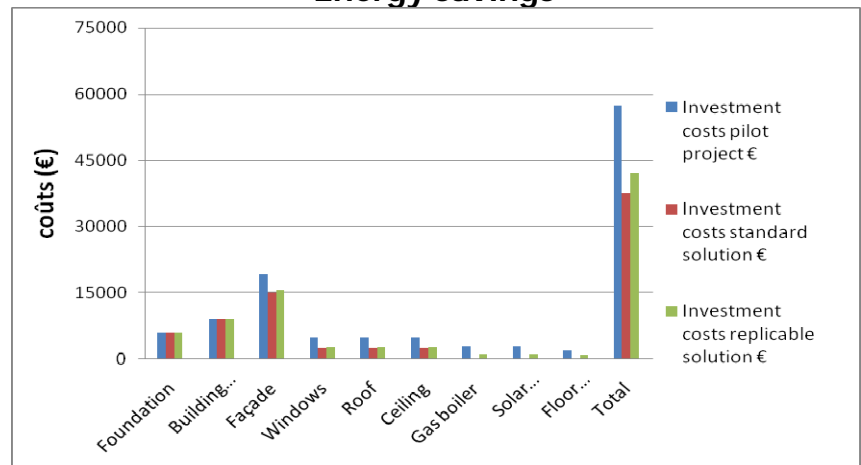
- Use of double glazed windows,

- Natural ventilation in summer.

- Location: Algiers
- Type of building: Residential
- Specification: 1 unit
- New construction Using Stabilized Earth Concrete



Energy savings



Costs

Pay back period = 10 years

