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.

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

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

Energy savings
Costs
Pay back period = 10 years