TREES

Training for Renovated Energy Efficient Social Housing

ARMINES

Scientific leader

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SAVE
CONTRACT N° EIE/05/110S12420021
01/01/2006 - 31/12/2007

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www.cep.ensmp.fr/trees

ABSTRACT

Objectives

Numerous European research and demonstration projects concerned the improvement of thermal performance of buildings, but the dissemination of the results remains limited in the professional practice and education, the knowledge level being very different among European countries. Much effort has been dedicated to new buildings, though much more energy is consumed in the existing building stock. This high energy consumption has dramatic consequences for low income families ("energy poverty"). A focus on social houses would have very positive environmental, social and economic effects. Such a policy would also influence the rest of the building sector.

The implementation of the European Directive on the energy performance of buildings (December 2002) impulses some changes that require innovation and skill. The aim of the project TREES is to organize a collaboration between researchers -or professionals dealing with innovation- and teachers, in order to integrate new knowledge in training : architecture courses and continuing education of social housing managers.

Description of the work

Important decision makers in social housing renovation are the managers in social housing associations or companies, and architects. These groups are therefore targeted and appropriate educational structures are contacted in order to constitute a users group to whom the deliverables are proposed for a review and exploitation.

The renovation of social houses is a specific topic. It is therefore planned to develop modular educational material that can be used in a flexible way within more global courses (e.g. continuing education of architects, building managers etc.). An internal review among the partners allowed the quality of the material to be improved by integrating European best practice.

The users group has been invited to workshops : the produced material has been presented and evaluated, then its implementation in courses is being discussed. The partners have evaluated this feedback and adapted the material accordingly. The final deliverable is available on the internet end of 2007, ready to be used in courses.

Energy Management Agency
Intelligent Energy Europe

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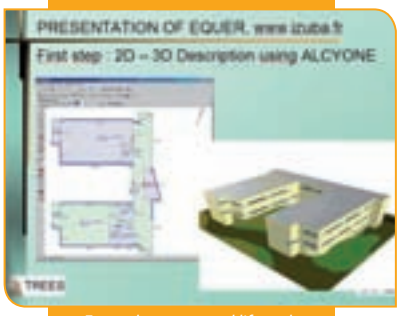
Solar collectors avoiding to repair a terrace roof



Example energy and life cycle assessment tool

Life cycle cost evaluation

Dunaújváros Hungary

Results

The final product is in the form of texts and slides in English.

Advanced technologies are described by specialists (e.g. integrating solar hot water systems on a roof, preheating ventilation air, insulating and reducing thermal bridges). Tools are proposed (e.g.thermal simulation, life cycle assessment, cost calculation), allowing the interest of these technologies to be assessed in terms of energy saving, economy and improvement of environmental quality. The presentation of case studies (e.g. European demonstration projects) illustrates the approach and professional good practice. The material could eventually be translated for replication in various countries.

Harmonisation of the knowledge at a European level helps promoting good practice, particularly in the new member states.

PARTNERS

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