

Projet FP7 - HERB

Nom du projet	Holistic energy-efficient retrofitting of residual buildings – HERB
Call	EeB-NMP-2012-2
Type de projet	Large-scale integrating project
Rôle de la HES-SO	Participant
Chercheur impliqué	Osman Sari (HEIG-VD)
Participants	University of Nottingham (United Kingdom) – Coordinateur ; Comune di Bologna (Italy) ; Nederlandse organisatie voor toegepast natuurwetenschappelijk (Netherlands); Onyx Solar Energy (Spain); Hochschule für Technik Stuttgart (Germany); Camara municipal de Almada (Portugal) ; Green Evolution anonymi etaireia ypiresion perivallontos – energieias – oikonomias Anthraka (Greece) ; Przedsiębiorstwo innowacyjno (Poland) ; Haute école spécialisée de Suisse occidentale (Switzerland) ; Mark Group Ltd (United Kingdom) ; Kingspan Insulation Ltd (United Kingdom) ; Alma Mater Studiorum-Universita di Bologna (Italy) ; National and Kapodistrian University of Athens (Greece) ; Phase Change Material products Ltd (United Kingdom) ; E-Value – estudos e projectos de ambiente e economia SA (Portugal) ; Leicester Housing Association Ltd IPS (United Kingdom) ; Izocam ticaret ve sanayi anonim sirkerti (Turkey).
Budget global	8.605 millions euro / financement UE : 5.8 millions euro
Durée	42 mois, début le 15.10.2012
Résumé	The proposed project will develop and demonstrate energy efficient new and innovative technologies and solutions for retrofitting and performance monitoring of a number of typical residential buildings in EU countries. Technologies envisaged for envelope retrofitting include various types of insulation materials. Energy efficient solutions will also be deployed including energy efficient lighting and HVAC, and renewable energy systems. The technologies and solutions will be affordable, durable, easy for installation and compatible with existing building functions and aesthetics as well as energy efficient. The types of building for retrofitting will include detached, semidetached and terrace houses, and flats of different ages. Methods for measurement of building performance before and after retrofitting will include leakage test and thermal imaging to determine the major areas of building envelope for improvement, in addition to smart energy metering for individual technologies and building as a whole. The buildings will be retrofitted to at least the latest national building standards for new buildings. The type and number of technology deployed will be optimised using life cycle energy analysis for each type of building. The work programme will involve development of computer models for optimising technologies and solutions, analysing dynamic energy demand of buildings and predicting microclimate indoors, development and testing of technologies and solutions under laboratory conditions, retrofitting and monitoring residential buildings in different climatic conditions, and a socio-economic analysis. The above outcomes will be delivered through innovative solutions developed by a Consortium comprising leading companies, universities and public institutions from 10 European countries.

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