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Sustainable, comfortable and competitive biomass based heating of private houses

BIOHOUSING

Lack of knowledge, disregarding requirements of biomass heating and absence of standard technical systems are the greatest barriers in promoting biomass based energy in private houses. BioHousing aims to remove the barriers via designing of standard and commercial technical systems and by producing tools and information material for sustainable biomass heating. Project encourages energy maintenance service entrepreneurship and train energy actors to increase their professional skills to advice house builders and decision-makers. Use of stoves as auxiliary or main heating system is common in Europe. Selection of stove and firewood storage and good firing practices are essential to avoid emissions, to get efficient combustion and comfortable heat.

Results

- Two innovative and user-friendly web-based tools to assist households, the house builder or renovator by comparing different heating systems and offering information about heating related equipment. (www.biohousing.eu.com/heatingtool, www.biohousing.eu.com/catalogue). It focuses on firewood / pellet / briquette, the storage and placement of stove/fireplace/boilers/wood-fuelled heating networks.
- Several kinds of prefabricated boiler room unit concepts have been developed and / or promoted : EnergyCabin (solar+wood), TT-Group (instalable inside the house, Biocompact unit (plug and heat solution)
- Tailor-made training courses (theoretical and practical lessons) have been organised for e.g. chimney sweepers, hpac (heating, plumbing, air-conditioning) planners, architects and civil engineers, house manufacturers and retailers. Altogether 1044 persons have been trained. Extensive training material packages published in Finnish, English, German, Italian, French and Spanish
- A wide range of Information material for sustainable heating by biomass is published (www.biohousing.eu/stoveheating): A manual on Efficient and environmentally friendly biomass heating in Finnish, English, German, Italian, French and Spanish; A guide for private houses on storage of firewood in Finnish, Swedish, English and French; A guide for connecting several houses to a micro-heating network published in Finnish, English, German, Italian, French and Spanish
- New business concepts were developed to encourage entrepreneurs to start-up or enlarge biomass related business (http://www.biohousing.eu.com/ > Entrepreneurship)

Lesson learned

- A prefabricated boiler room enables the house builder to choose freely the heating system which pleases him most. Afterwards the change of heating system is possible in a profitable way because large modifications are not needed. It helps to change oil heating to solid biomass heating and therefore the use of the heating oil decreases.
- Training actions are aimed to the target groups, which are energy advisors and trainers of potential end users or decision-makers. Well-trained advisors disseminate widely information of solid biomass heating system as a well-working, reliable and cost-effective alternative and remove suspicions of house builders towards solid biomass heating. Increased knowledge raises demand and sale of solid biomass heating systems.
- Project emphasizes the objectives and policies e.g. to limit CO2 emissions, to reduce dependency on imported energy, to ensure security of supply and to raise regional employment.

Partners and coordinator

Jyvaskyla Innovation Ltd [1]	Finland
Österreichisches Forschungsinstitut für Chemie und Technik [2]	Austria
VTT Technical Research Centre of Finland [3]	Finland
ASSOCIATION REGIONALE BIOMASSE NORMANDIE [4]	France
ETA, Energia, Trasporti, Agricoltura srl [5]	Italy
ESCAN, S.A. [6]	Spain
JyvÃ¤skylÃ¤ University of Applied Sciences [7]	Finland

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Budget

Overall budget: 1.523.474,00 € (EU contribution: 50,00 %)

Key documents

- Summary Slides [8]
  PPT 945 KB

- Final Publication [9]
  PDF 1.81 MB
- Firewood Production Manual [10]
  PDF 1.64 MB
- Firewood Storage Guide [11]
  PDF 305.93 KB
- Heating Instructions [12]
  PDF 359.06 KB
- Stove Manual [13]
  PDF 7.2 MB
- Business Analysis [14]
  PDF 483.76 KB
- Market Analysis [15]
  PDF 648.38 KB
- BioHousing Brochures [16]
  ZIP 1.5 MB
- National Emissions Regulations [17]
  ZIP 747.42 KB
- Information in Finnish [18]
  ZIP 13.7 MB
- Information in French [19]
  ZIP 3.2 MB
- Information in German [20]
  ZIP 2.5 MB
- Information in Italian [21]
  ZIP 7.18 MB
- Information in Spanish [22]
  ZIP 3.52 MB
- Information in Swedish [23]
  ZIP 506.18 KB

In brief

Sector: Small-scale applications

Duration: *01/01/2006* to *31/12/2008*

Contract number: EISAS/EIE/05/067/2005

Website: http://www.biohousing.eu.com

Tags:

appliances
biomass
public awareness

Related projects

- [ACCESS [24]] Accelerated Penetration of Small-Scale Biomass and Solar Technologies
- [BEST RESULT [25]] Building and Energy Systems and Technologies in Renewable Energy Sources...
- [EUROPEAN SOLAR DAY [26]] Expanding the existing annual "Solar Day" in Austria,...
- [BIOEUPARKS [27]] Exploiting the potentialities of solid biomasses in EU Parks
- [GASIFICATION GUIDE [28]] Guideline for Safe and Eco-friendly Biomass Gasification
- [RESINBUIL [29]] Introduction of Renewable Energies in Building Sector
- [PERCH [30]] Production of Electricity with RES & CHP for Homeowners
- [ENERBUILDING [31]] Promoting the Rational Use of Energy and Small Scale Renewable Energy...
- [PRODES [32]] Promotion of Renewable Energy for Water production through Desalination
- [ICOSAW [33]] Promotion of the Intelligent Combination of Sun and Wood for Producing...
- [SOLPOOL [34]] Solar Energy Use in Outdoor Swimming Pools
- [WIN FOR RES [35]] Web Integrated Network for Renewable Energy Sources

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Links
[1] https://ec.europa.eu/energy/intelligent/projects/en/partners/ji-1
[2] https://ec.europa.eu/energy/intelligent/projects/en/partners/osterreichisches-forschungsinstitut-fur-chemie-und-technik
[3] https://ec.europa.eu/energy/intelligent/projects/en/partners/vtt-technical-research-centre-finland
[4] https://ec.europa.eu/energy/intelligent/projects/en/partners/association-regionale-biomasse-normandie
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[7] https://ec.europa.eu/energy/intelligent/projects/en/partners/jamk
[8] https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/biohousing_summary_slides.ppt
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