

Passive Homes Training Module for Architects and Planners

Lecture's Handbook



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Meet the Passive Homes Training Module



The Passive Homes Training Module a major dissemination tool of the Passive-On project, as it has a large and crucial public: those involved in supplying houses to the market.

The training module is therefore designed for professionals such as architects, developers, builders and technicians. Therefore, it presents mainly technical aspects, although some political and economical issues are also addressed.

What is here

The Training Module is composed of three main elements:

- Slides presentation
- Lecture's Handbook (the present document)
- Passive House Guidelines

The Presentation and Handbook may be used by disseminators such as university lectures, energy agencies, architectural, engineering and technical professional bodies. It allows a first introduction to Passive House design

philosophy, key aspects of the Design Guidelines and a quick overview of the Passive House Planning Package software (PHPP).

The Guidelines can be used for reference when presenting the Training Module. Nevertheless, they are first intended as a professional tool for those who wish to develop Passive Houses in warm European countries.

The Passive House Planning Package (PHPP) software is also available and exemplified for one of the Passive House national proposals for southern Europe.

Additional material

Other documents produced within the Passive-On project can be downloaded from the project website:

www.passive-on.org

A comprehensive reference list is supplied at the end of the Guidelines.

How to use the Slides Presentation



The presentation covers:

- An overview of building energy consumption, namely in Europe
- An introduction to key concepts such as Passive Systems and Passive Design
- Considerations on Thermal comfort and different Comfort Models
- The early *Passivhaus* standard developed in Germany and focused on heating climates
- How could this standard be updated in order to match southern European warmer climates
- The Design Guidelines: presentation of passive strategies, and examples of *Passivhaus* for different southern European climates of 5 countries
- Climate Analysis and applicability of strategies
- Economics of *Passivhaus* and market considerations
- The Passive House Planning Package software
- An overview of the Passive-On project

The reason of designing one single presentation for all publics and countries is that the information is relevant in general. For example, it is interesting for a professional

working in colder regions of Spain to know what solutions were proposed for similar climates in France or Italy.

However, when using the material supplied for presentations, Lecturers may wish to “customize” this information. For example:

Match the public

Stress issues that are more relevant to their specific public, for instance:

- When presenting Passive Houses to developers you may pull attention to economic, comfort and market advantages of Passive Houses;
- If your public is composed of builders or engineers, technical aspects of implementation can be more developed, particularly regarding national and regional availability of systems, efficiency of equipments, cares to be taken in installation, etc.;
- Typically, architects should be aware of all aspects presented, but you may emphasize for instance how aesthetical freedom is compatible with most passive strategies, and how the definition of *Passivhaus* for warm climates is based on building performance regarding Energy

and Comfort, and not prescriptive solutions designs.

Focus on particular examples

You may need to manage the available time and your public attention:

- From the available material, select the information you wish to present and what you can step over
- Develop further particular strategies or national proposals that you feel are more relevant to your framework.

Add your own experience

Include examples from your own experience or knowledge, such as:

- Passive strategies not presented in the Guidelines
- Low Energy or *Passivhaus* buildings that you may know and what strategies they implement
- New products available on local market
- Recent mechanisms (European, national, regional) for development of Passive Houses, such as legislation, incentives, etc.

Try it

Try designing a Passive House and present your proposal specificities and performance to your public. This may be particularly useful if you work in education.

This document has been developed in the framework of the Intelligent Energy Europe sponsored project “Passive-On”, as Work Package 5.2, Passive Home Training Module and Technical Workshops.

The Training Module also includes slides presentation and the Guidelines report

The current document and the presentation slides have been prepared by Natural Works - Guilherme Carrilho da Graça and Maria Malato Lerer – based on outputs of the Passive-On project, and reviewed by other partners:

Italy: eERG Politecnico di Milano, Provincia di Venezia, Rockwool Italia

France: International Conseil Énergie (ICE)

Germany: Passivhaus Institut

Portugal: Natural Works e Instituto Nacional de Engenharia, Tecnologia e Inovação (INETI)

Spain: Asociación de Investigación y Cooperación Industrial de Andalucía (AICIA)

United Kingdom: School of the Built Environment, Nottingham University

For more information about passive-On

www.passive-on.org

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For general information about the passive-On project, as well as in Italy write to: info@passive-on.org

Sponsors

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