

Passive House educational seminar for professionals from the building sector

Residential buildings

Concept for organisation of seminars, workshops and study tours

This report is the presents the concept for organisation of seminars, workshops and study tours for professionals described in work package 3 task 1 page 15 in the contract document (Annex I) The document is the final version of deliverable 3.1 as listed on page 28 of the contract document (Annex I)

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Seminar

Introduction

The seminar is a basic educational course about Passive Houses, organised by the local partner in the European funded PASS-NET project. It is a two-day seminar and one day study tour package and is targeted towards the professionals from the building sector, including architects, engineers, energy consultants, developers, construction companies, building component producers (for example windows and doors producers), and university lecturers. The seminar will consist of:

- theoretical background about International criteria for Passive Houses including regional/local adaptations of the criteria,
- introduction in Passive House design tools for calculating energy balances, the Passive House Planning Package (PHPP) and local national calculation methods, and
- presentation on regional Passive House completed examples.

Instructors at the seminar are local and international experts in Passive Houses. After the seminar, there will be a possibility to go on a local study tour where existing Passive Houses will be visited. In those countries where there are no built examples, a half-day workshop will be organised where possibilities for starting up Passive House projects will be discussed.

Seminar Contents

The seminars will: follow cover the following topics:

Day 1: Passive House, the theoretical background and design issues

- What is a Passive House?
- Design - According to Passive House criteria
- Design - Heating systems and Energy supply
- Design - Ventilation systems
- Design - Solar Energy Utilization
- Design - Solar shading
- Design - Air tightness
- Design - Windows

Day 2: Passive House, energy and built examples

- Energy calculations including an introduction to PHPP
- Energy statistics and Certification
- Planning and Concept Development
- Realization and Construction Processes
- Regional and National Passive House examples

The Seminars will, although nationally and regionally adapted, contain a common core of information. This core is presented and exemplified in the core presentations available on the PASS-NET website, www.pass-net.net. The core presentations form the basis of the seminars and are all in English and can be translated into the national languages of the partners.

Target group for the seminar

The seminar is targeted to different actors in the building sector. The seminar offers lectures in different topics covering aspects from design to energy calculations, realization and certification. It is important that the different actors in a Passive House project are aware of various aspects connected to success of the project.

The success of Passive House projects are to some extent dependent on a good cooperation between different actors in the building process, they should work together from the very beginning. The Seminar can therefore be used as an introduction course on Passive Houses during the initial stage of a Passive House project where the participants do not have previous experience in building a Passive House. Therefore it is desirable that the participants at the Passive House seminar should represent all different stages in the building process. For instance, architects as the first group in the design process should be aware of how much their design affects the energy performances of the future buildings. Also researchers should be included in the target group for the seminars, since they often play an important role in the monitoring and follow-up for Passive House projects during development and demonstration stages.

The participants that are invited for the PASS-NET project seminars should at least have a strong interest in Passive Houses, but without previous experience in building one. They should have at least a number of years of professional experience. This ensures that the participants are at a similar level, for which the seminar contents are developed. Preferably they could have a project in an early stage of planning in order to relate to the issues brought up at the seminar.

The group should be from 20 to max 25 persons in order to have good results from the seminar. An ideal group should consist of

- 4 architects,
- 4 building engineers,
- 4 energy consultants,
- 4-6 developers,
- 4-6 construction companies,
- 4 building component producers (for example windows and doors producers, building element producers, ventilation system producers, ...)
- 2 -3 university lecturers

Seminar material

The material for the Seminar should be prepared in advance. Invitation and information about the Seminar should contain a short introduction to Passive Houses, target group, programme, and contact details about the organiser. The PASS-NET logo should always be visible on all Seminar materials, including the logo of IEEE.

The illustrations of the core presentations can be used within the PASS-NET project as an agreement with the copyright holders of the illustrations have been made. All partners of the PASS-NET project agreed to these terms of usage.

Beside the Power Point presentation, a printed material should follow. The printed material is a printed version of the Power Point presentation which allows for writing notes from the lecture. The material is intended for the participant's future professional personal use. All the material should be packed in folders easy to use.

The environment for the seminars

The seminars should be held in a seminar room which provides technical and shading support for a Power point presentation and white board for the notes by the lecturer. Tables should have a different arrangement possibility so that groups can be easily made. Since the seminar is organised as a two day event, lunch and coffee breaks should be provided.

Seminars will be organised in a dialogue form so that after each presentation a short dialogue can be established among the participants. It is important for the participants to understand each others role and what is important when planning a Passive House.

Lecturers

The lecturers at the Passive House Seminar are mainly partners in the PASS-NET project. For specific topics national and international experts could be invited.

Follow-up of the seminar

After every Seminar results should be summed up by the Seminar leader in the form of a short report. It is recommended to note down the questions brought up by the participants during the seminar, and the interesting points/conclusions made during the dialogue.

The participants will receive a questionnaire (attached in the Appendix) that they can fill in. It is important that an evaluation is performed in order to exchange the experiences between PASS-NET partners and improve the Seminars. The questionnaires should be summarized in the Excel-template provided by IVL and available on the Sharehouse of PASS-NET.

Study tours

As a complementary to the Seminars, study tours should be organised. The purpose of the study tours is to contribute to better understanding of the Passive House concept by the Seminar participants. Theme of the study tours is "Theory in practice".

A study tour should be at least half day long and maximum one working day. In case there are no built examples or examples under construction in the proximity of the Seminar location, workshops could be organised.

What should be visited?

Focus for the study tours should be given to built Passive Houses but also to buildings in process of construction, where issues that rise up and are important during the construction stage are shown and discussed. Preferably, a study tour should include at least one example of a building in construction stage and one built example.

Since the Seminar focuses on residential buildings, if possible, both multifamily and single family housing should be included in the study tour.

Who should organise the study tours?

Study tours should be organised by the Seminar organisers in cooperation with the building owners and people involved in the construction of the Passive House visited.

If the building is in the use stage, it would be useful to have the users give a short oral presentation and give their experiences from living in a Passive House to the visitors. At the same time it is important that someone from the planning and construction stage is present in order to give the technical details and experiences from the development stage of the building.

If the building is under construction, it is recommended that the construction site is presented by both actors from the planning stage and the construction stage; like the architect, building engineer or ventilation expert involved in the development stage of the project, and actors from the construction stage, which can talk about the specific issues that arise under a construction stage of a Passive House, like ensuring air tightness, blower door testing, installation of different machines or other constructional specifics.

Material for the study tours

For each study tour a short brochure should be made about the visited sites. This will help the participants to get a better understanding and background information about the houses that are visited. It would be useful to include those examples in the presentation during the Seminar the day before. If so, this would also facilitate the preparation of the brochures for the study tour. In addition, participants having a background about the project would get a better overall picture, being better prepared for possible questions.

The material should be included in the short report summarizing the Seminar results.

Workshops in case there are no Passive House examples to visit

In the case there are no built or under construction Passive Houses in proximity of the Seminar location, workshops should be organised. This can contribute to starting a Passive House project in the region. Participants at the workshop should primarily be Seminar participants but also possible housing owners, like social housing representatives or

developers interested in building Passive Houses. Also, one person from the PASS-NET team that has experience from building a Passive House should be present.

Issues to be explored during workshops

Before starting the workshop a potential project should be selected. This will be the guiding theme of the workshop.

The workshop should start by summing up experiences from the Seminar days, and discussing the right procedure for building a Passive House. Built Passive House examples that were shown the day before should be explored in more detail, connected to the chosen case to be built.

The goal with the workshop is to by the end of the day have an approximate picture of project specifics, what are the main building components and technical details that should be included. Also, out of site location specifics questions like what should be explored and considered during the planning stage should be explored.

The workshop should be led by the experienced PASS-NET member together with the local PASS-NET organiser. Workshops should be half day or maximum one full working day long.

For those interested, more detailed courses in Passive Houses including PHPP or similar programme courses could be offered.

Workshop follow-up

After the workshop, results should be summarized and a short report included into the Seminar report. The summary could also be useful for the potential next stage of the project discussed.

Appendix

