



25TH INTERNATIONAL PASSIVE HOUSE CONFERENCE 2021

*Passive House -
The key to
sustainable
buildings!*

September 10-11, 2021
Wuppertal,
Germany
and ONLINE

**Call for
papers**

Application close
February 15, 2021

passivehouseconference.org

Organising body: Passive House Institute
Rheinstraße 14/16 | 64283 Darmstadt | Germany



On 10-11 September 2021, the Passive House Institute, in collaboration with the EnergyAgency.NRW, will host the 25th International Passive House Conference in Wuppertal, Germany. © Passive House Institute

The key to a healthy climate

25th International Passive House Conference in September in Wuppertal and online

Darmstadt/Germany. The 25th International Passive House Conference will take place from September 10-11th in Wuppertal, Germany, under the patronage of Andreas Pinkwart, North Rhine Westphalia's State Minister for Economic Affairs. Only buildings with a low energy demand for heating and cooling will put us on the path to efficient climate protection. By reducing the energy demand, we can ensure that our building stock's energy needs can be fully met by renewable energy sources, long term and at large scale. Encompassing this idea is this year's International Passive House Conference and complementary exhibition, which bare the motto "Passive House - The key to sustainable buildings!"

Currently, the conference is planned as an in-person event in the historical City Hall of Wuppertal, Germany, on September 10 and 11. There will also be online offerings accompanying the event to reach a global audience. "Last year's online conference opened a lot of doors for us and helped us reach even more international participants. Because of that, we will complement this year's in-person conference with online offerings," says Jan Steiger, one of the Passive House Institute's managing directors. The Call for Papers is open until February 15. The Passive House Institute is looking for projects, research and new developments to create an inspiring and varied programme. The Scientific Advisory Board will select the final lecture topics from the list of submissions.



New within old: In North Rhine Westphalia's Steinhagen, the builders integrated their Passive House (I.) into a 100-year-old carriage house. The German public television channel ZDF was also impressed by the project and reports about it in the "Morgenmagazin". You can find the report by clicking on this [link](#), it starts at 25:20. © Thomas Spooren

25th anniversary

This year's event will be the 25th edition of the International Passive House Conference. The first conference was held in 1996 in Darmstadt, Germany, the home of the Passive House Institute. Ever since, the event has taken place annually in different cities all over Germany, twice in Austria and even in China in 2019. Since its humble beginnings in 1996, there have been major advancements in the building sector, which has adopted energy efficiency principles. However, there is room for improvement: Many buildings could easily be constructed or retrofitted to a higher energy performance. This is the reason that experts advise the need for stricter energy performance guidelines.



This row house in Mönchengladbach, also a city in the state of North Rhine Westphalia, is one of 12 identical building projects and has been retrofitted to the EnerPHit standard. The EnerPHit standard promises energy efficiency for existing buildings that comes close to the Passive House standard. The garden façade (r), too, profited from the retrofit. © bau grün!

Energy efficiency first

This year's conference is no different when it comes to covering a wide variety of topics from the world of highly energy efficient construction. The topics range from energy efficiency and renewables, districts and components, serial retrofitting, Passive House policy, cooling concepts and capacity building and education. These topics have one thing in common, the focus on #EfficiencyFirst. Only after drastically improving the energy efficiency of our buildings, we can truly achieve a sustainable building sector. This, in turn, will improve our ability to protect the climate. "We want to show that Passive Houses are a well-suited and straightforward solution to protect the climate and improve the living conditions of their inhabitants. Residents profit from a higher comfort level and better air quality", explains Jan Steiger.

Passive House and NZEB

Nearly Zero Energy Buildings (NZEB) are also an important topic at the Wuppertal conference. According to the European Union's guidelines, government buildings have been required to meet NZEB targets since 2019. Starting this year, residential new builds must also meet this level. Each EU country has its own definition of an NZEB, though. In Greece, for example, a building complying with local NZEB guidelines still uses four times the energy of a Passive House. In Germany, too, the NZEB requirements result in much higher energy consumption than the Passive House standard. "The Passive House criteria are open and rooted in building physics. Passive Houses can be achieved worldwide and are proven to offer the energy savings they promise, and thus, are necessary for effective climate protection", says Steiger.

Passive House Exhibition

This year too, the **Passive House Exhibition** will take place together with the International Passive House Conference. The exhibition will be available in Wuppertal's city hall and digitally via the virtual exhibition platform. Every year, the number of certified Passive House components grows. There are now well over 1000 components available from a variety of international manufacturers.

Passive House Award 2021

The **Passive House Award 2021**, supported by the EnergyAgency.NRW, will be presented during the 25th International Passive House Conference. The architecture award aims to honour highly energy efficient projects and certified Passive House buildings. This year's award will put emphasis on the use of renewable energy sources in building projects. For more information, visit www.passivehouse-award.com.

For more info about the 25th International Passive House conference visit:
<https://passivehouseconference.org/en/>

INTERNATIONAL PASSIVE HOUSE CONFERENCE 2021

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General Information

Passive House buildings

With the Passive House concept the heat loss that typically takes place in buildings through the walls, roof and windows is drastically reduced. With the five basic principles – high-quality thermal insulation, windows with triple glazing, avoidance of thermal bridges, an airtight building envelope, and a ventilation system with heat recovery – a Passive House building needs very little energy. Passive House buildings can therefore dispense with *classic* building heating systems. Such buildings are called "passive houses" because a major part of their heating demand is met through "passive" sources such as solar radiation or the heat emitted by occupants and technical appliances.

In a Passive House building, the heat is retained for a long time because it escapes very slowly. For this reason, active heating is needed only during extremely cold days and only a small amount of energy is required for this. A Passive House building also offers an advantage in the summer: the excellent level of insulation ensures that the heat stays outside, therefore active cooling usually isn't necessary in residential buildings. A Passive House building consumes about 90 percent less heating energy than an existing building and 75 percent less energy than an average new construction.

Passive House & NZEB

The Passive House standard meets the EU requirements for Nearly Zero Energy Buildings. According to the European Buildings Directive *EPBD*, all member states must specify requirements for so-called NZEBs in their national building regulations. These came into effect in January 2019 for public buildings and apply for all other buildings since this year 2021.



The world's first Passive House building in Darmstadt. © Peter Cook

Pioneer project

The first Passive House in the world was built in Darmstadt-Kranichstein (Germany) 30 years ago by four private homeowners. Prof Wolfgang Feist was one of them. Ever since the homeowners moved in with their families in 1991, these terraced houses have been regarded as a pioneer project for the Passive House standard.



Prof Wolfgang Feist.
© Peter Cook

Passive House and renewable energy

The Passive House standard can be combined well with on-site renewable energy generation. Since April 2015, the new building classes "Passive House Plus" and "Passive House Premium" have been available for this supply concept.

Passive House Institute

The Passive House Institute with its headquarters in Darmstadt (Germany) is an independent research institute for highly efficient use of energy in buildings. The Institute founded by Prof Wolfgang Feist holds a leading position internationally with regard to research and development in the field of energy efficient construction. Among other things, Prof Wolfgang Feist was awarded the DBU Environmental Prize in 2001 for developing the Passive House concept.

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