



An apartment block in Berlin with 21 units – realised to the Passive House Standard and as a zero-emissions building. “Building the future – sustainably!” is the focal theme of the 24th International Passive House Conference 2020. © Andrea Kroth

Better homes with less energy

Passive House Conference in Berlin aims for a sustainable future – September 2020

Darmstadt, Germany. Saving energy is comparatively easy in the case of buildings: these can be built so that they will not use much energy in the first place. If renewable energy is added to the mix, then sustainability is optimally implemented: “Building the future – sustainably!”, this is the focal theme of the 24th International Passive House Conference 2020 in Berlin. The German Federal Ministry of Economics has assumed patronage for the conference. The call for papers has begun.

Energy efficiency comes first! In order to do more for climate protection in the building sector, first, the efficiency of buildings must be improved significantly. Buildings will then require very little energy for heating or any cooling. This applies equally for new buildings and retrofits. After that, the energy efficient buildings can be supplied entirely with regionally produced renewable energy. A big advantage of highly efficient buildings is their perceptibly higher level of living comfort. The 24th International Passive House Conference, to which the Passive House Institute and its partners are inviting everyone on **20 and 21 September 2020** (Sunday and Monday) at the Estrel Congress Center in Berlin, will focus on “Building the future – sustainably!”



Passive House in Berlin with renewable energy and utilisation of rainwater. © Andrea Kroth

Green Deal

The recently introduced **European Green Deal** of the European Commission also mentions highly energy efficient buildings as a contribution to more effective climate protection. For this purpose, among other things, the number of building modernisations will be increase substantially, in that

the EU and its member states take part in a "wave of modernisations". With the Green Deal, the European economies will become independent of fossil fuels and climate neutral by the year 2050.

Attractive role models

"With our involvement in China, we have demon-

strated our commitment to sustainable development in this large growth area. Europe may only be regarded as an attractive role model by the international community if we can progress in energy efficiency and contribute towards positive overall performance. The chances for this are high with the Passive House standard and EnerPHit modernisations. That is what we wish to demonstrate in Berlin," explains Dr Wolfgang Feist of the Passive House Institute. According to Feist, successful climate protection crucially depends on specific actions to significantly reduce the enormous current emissions on a broad scale.

Abstracts until March 2020

Abstracts for the 24th International Passive House Conference, under the auspices of the German



Eyecatching even in rainy weather. This Passive House hotel in the Spanish town of San Sebastián was built using a lot of wood and was on the itinerary of an excursion within the framework of the COP25 in Spain. © PHI

Federal Ministry of Economics, can be submitted until **2 March 2020**. Among other things, the topics include Passive House buildings and renewable energy supply, Passive House buildings and sustainability, serial retrofits with Passive House components, Passive House buildings in emerging countries and approaches to establishing the political implementation of Passive House constructions.

Passive House and NZEB

The Nearly-Zero Energy Buildings (NZEB), stipulated by the European Union, will also be a key topic in Berlin. New public buildings must already be implemented as NZEB from 2019 according to requirements of the European Union, for private new constructions, these requirements will apply from 2021. The Passive House Standard meets the requirements for NZEB.



Components for energy efficient construction

The **Specialist Exhibition for Passive House components** will accompany both days of the International Passive House Conference in Berlin. The number of components for energy efficient construction and retrofits, which have been certified by the Passive House Institute and are thus quality approved, has been steadily increasing for many years. With almost 1000 certified components, these products by international manufacturers now constitute a major industrial sector. Many workshops will be organised in the run-up to the 24th International Passive House Conference and after its conclusion. Excursions to ground-breaking Passive House projects are planned on Tuesday 22 September 2020. The big Passive House Party will take place on the evening of the first conference day.

Architecture Competition

At the International Passive House Conference in China in October 2019, the Passive House Institute announced the **Passive House Award 2020**. This architecture award will recognise extremely energy efficient buildings which have also been certified. It focuses especially on the regenerative energy supply of the buildings. Certified Passive House buildings can be submitted for this award until June 2020. The awards ceremony will be held during the Passive House Conference in Berlin.

Further information about the conference can be found here:

www.passivehouse-conference.org

24TH INTERNATIONAL PASSIVE HOUSE CONFERENCE 2020

Patronage



Federal Ministry
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General Information

Passive House buildings

In Passive House buildings, general heat loss by walls, windows and the roof is drastically reduced - by means of high-quality thermal insulation, windows with triple glazing and an airtight building envelope. In winter, preheated air is introduced into the building by a heat recovery ventilation system. In summer, the excellent level of insulation ensures that the heat stays outside. Altogether five basic Passive House principles allow these highly efficient buildings to dispense with *classic* building heating. 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. A Passive House thus consumes about 90 percent less heating energy than existing buildings and 75 percent less energy than an average new construction.

Passive House & NZEB

The Passive House Standard already 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 will apply for all other buildings in 2021.

Pioneer project

The first Passive House in the world was built 28 years ago in Darmstadt-Kranichstein (Germany) by four private homeowners. Dr 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. After extensive technical testing, building physicists attest to the still unimpaired functioning of the first Passive House and its unchanged low heating energy consumption. With its newly installed photovoltaic system, the first Passive House now utilises renewable energy and received the Passive House Plus certificate for this reason.



The world's first Passive House building in Darmstadt.

© 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. The first buildings in these two categories have already been certified, including private houses as well as office buildings.

Passive Houses worldwide

Passive Houses buildings for all types of uses now exist everywhere. In addition to residential and office buildings there are also kindergartens and schools, sports halls, swimming pools and factories built as Passive House buildings. The first Passive House hospital in the world is currently being built in Frankfurt am Main. Interest in Passive House is growing. In view of the consumption of resources in industrialised countries and the need to contain global warming, municipalities, businesses and private people are increasingly implementing new constructions or retrofits to the Passive House Standard.

Passive House Institute

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



Dr Wolfgang Feist

© Peter Cook

Passive House Conference

The 24th International Passive House Conference will be held on 20 and 21 September 2020 in Berlin. www.passivehouse-conference.org

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