Press Release

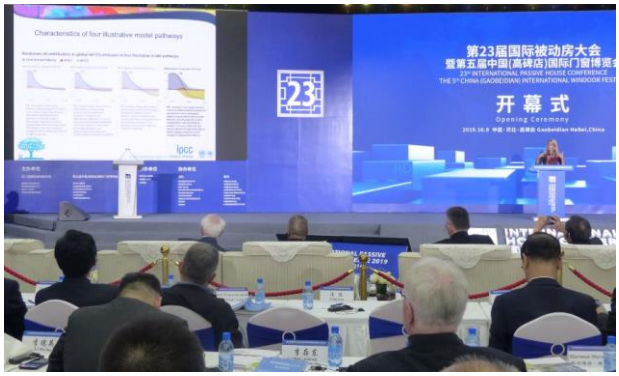
21 October 2019

Many international participants, as well as visitors from China, attended the first International Passive House Conference in Gaobeidian, China, where the world's largest Passive House development is being built. © Passive House Institute

"1.5 degrees is still possible!"

International Passive House Conference in China was a success for Passive House Institute

Darmstadt/Gaobeidian (China). **The 23rd International Passive House Conference's keynote speakers unanimously agreed that putting "energy efficiency first" is necessary to achieve the Paris Agreement's objectives. For the first time, the Passive House Institute held its annual Conference outside of Europe, in Gaobeidian, China. International participants travelled from all over to join local visitors who attended the Conference. The accompanying trade exhibition also attracted a large interested public. For the Passive House Institute and its partners, the conference was a success. At the close of the Conference, the Passive House Institute announced the "2020 Passive House Award" for excellence in Passive House architecture; the award ceremony will take place at the 24th Passive House Conference in Berlin.**



Inauguration of the first International Passive House Conference China. Professor Diana Ürge-Vorsatz of the International Panel on Climate Change IPCC also held an impressive speech. © Passive House Institute

Impressive commitment

"Going to China was the right decision. The commitment to highly energy efficient construction and sustainable development impressed us, particularly here in Hebei Province. We are happy to continue in this direction together," affirmed Professor Dr Wolfgang Feist, Founder of the Passive House Institute. In Gaobeidian, the Passive House Institute is monitoring the development of the Passive House Railway City, a development which is modelled on the German Bahnstadt in Heidelberg, achieving the Passive House Standard.

"Time is running out!"

More than 20 lecture series, workshops, presentation of certificates and award ceremonies for the winners of the Component Award and the Innovation Award – all this was well-received by the Conference participants of the 23rd International Passive House Conference in Gaobeidian. © Passive House Institute

With the completion of the over 20 high-rise buildings as well as several apartment blocks, the Railway City Gaobeidian will be the largest Passive House development in the world. Professor Diana Ürge-Vorsatz was very impressed with this housing development. As a member of the Intergovernmental Panel on Climate Change (IPCC), the environmental scientist highlighted in her keynote speech that July 2019 had been the warmest month since temperature records began. However, there is some good news: "Even though many may not believe this, the objective of limiting global warming to 1.5 degrees is still achievable, but only with great effort. Time is running out!"

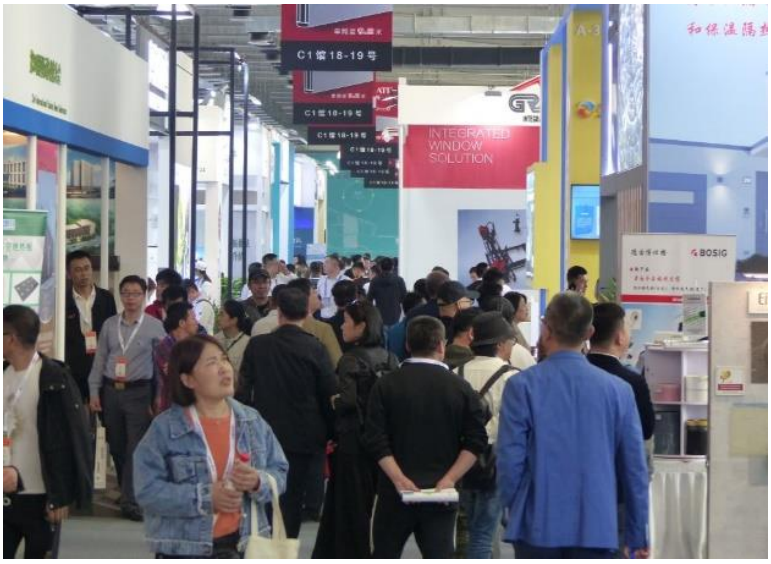
"Why are we still building differently?"

In the building sector, Passive House construction offers the opportunity to substantially reduce the operational energy demand and enjoy the added bonus of greater living comfort. "Passive House buildings are possible with the same budget as that of other buildings, and they are healthier in addition, so why are we still building differently?" asked Ürge-Vorsatz. According to Professor Dr Ernst Ulrich von Weizsäcker, a politician and co-president of the Club of Rome, in view of the limitations to growth our present lifestyle is "suicidal". Von Weizsäcker also emphasised the necessity for significantly reducing the energy demand and relying on climate-neutral technologies instead of, for example, new coal-fired power plants. He is also in favour of increasing the price of energy annually.

Professor Dr Wolfgang Feist, Professor Diana Ürge-Vorsatz, Professor Dr Ernst Ulrich von Weizsäcker, Ni Haiqiong and further keynote speakers held speeches during the first Passive House Conference in China. © Passive House Institute

Almost 80 certified products from China

In his speech, Professor Dr Wolfgang Feist outlined the success story of Passive House construction in China. He explained the necessity, particularly in warmer regions, for cooling with reduced energy expenditure during the summer months and also reducing the solar loads. "Together with appropriate insulation and improved components, the quality of indoor air will also improve considerably," explained Feist. He drew attention to the almost 80 windows produced by Chinese manufacturers which have been awarded a certificate as Passive House components and are at least twice as efficient as conventional products.



Many visitors from the Windoor Festival, which took place parallel to the Passive House Conference, obtained information relating to components for energy efficient construction during the Passive House Specialist Exhibition in Gaobeidian. © PHI

Solving problems

Ni Haiqiong, Director of the co-organiser Orient Sundar Group, stressed that energy consumption and environmental pollution have reached dangerous highs. In China, this issue has led to the development away from traditional window and door production in China, towards a growing industry of Passive House components. Vice Governor Zhang Gujiang explained that the Hebei Province is looking to the future with the Passive House Standard. The first Passive House Conference in China had laid the foundation for further establishing this technology in the region. Environmental engineer Dr Hou Li-an explained that problems with air quality caused by traditional construction methods can be solved with Passive House construction, among other things.

Future prospects

In his inaugural address, the Chairman of the Chinese Passive Building Alliance, Professor Xu Wie, referred to the 13th Five-Year Plan for the period 2016 till 2020, in which the Chinese Ministry of Construction stipulated the low-energy standard for the first time and thus laid the foundation for energy efficient construction in China. He outlined China's goal for consequently reducing the energy demand of buildings to nearly zero. Zhang Xiaoling, Director of the Beijing Kanqiju Certification Center, explained that Passive House buildings improved the health and living standards of the Chinese people. The main challenges now were quality control of the buildings and further training for construction professionals.

At the Conference, the Passive House Institute also presented certificates for Passive Houses. © PHI

Innovation

In Gaobeidian, many manufacturers of Passive House components were awarded a certificate for their products. In addition, the winners of the Component Award and the Innovation Award were presented by the Passive House Institute. The Innovation Award went to the following companies: EcoCocons, Slovakia/Lithuania, for its construction system consisting of straw, Q-Blue, Netherlands, for its shower-water heat recovery system, Swisspacer, Switzerland, for the new window spacer concept Triple, and Windoor City, China, for a wooden window concept with an aluminium shell which is adaptable to all climate zones.

Four companies received the Innovation Award 2019 in Gaobeidian. © PHI

23 companies from 12 countries took part in the "Windows for the future" Component Award 2019. The 14 award winners are individually listed on the website of the Passive House Institute. Picture: Passive House Institute

Component Award 2019

More than 23 companies from 12 countries took part in the Component Award 2019 for thermally improved windows, which was sponsored by the European Union within the framework of the AZEB (Affordable Zero Energy Buildings) project. In the cold climate category, the first prize went to the manufacturer Harbin Sayyas Windows from China for the PAZEN 120 window. For the cool-temperate climate, the first prize went to ENERsign from Wittlich (Germany) for its window ENERsign primus; Daimaru Kogyo (Japan), Blumer Lehmann (China) and SEDA (New Zealand) were awarded the prize in the category warm-temperate climate for the wood/aluminium window smartwin compact and Eurofinestra from Italy was awarded the prize for its wood window ZEN. The 14 award winners are listed on the website of the Passive House Institute.

The Passive House Institute and the international network iPHA were also represented at the Specialist Exhibition in Gaobeidian (left). Excursion to the Passive House settlement Bahnstadt Gaobeidian (right). © PHI

Workshops

Besides the series of 20 lecture series relating to worldwide Passive House projects, the conference programme was complemented by 14 workshops. Among other topics, workshops on the planning tools PHPP and designPH, airtightness, and the Sinfonia workshop on climate protection at the district level were offered. At the Passive House Trade Exhibition, also several thousand visitors from the Windoor Festivals that took place parallel to the Passive House conference were able to learn more about energy efficient construction. Finally, all participants of the Passive House Conference were invited on excursions to the railway City development in Gaobeidian and Passive House projects in Beijing, Zhuozhuo and Baoding.

Architecture Competition 2020

During the Conference, the Passive House Institute announced the "2020 Passive House Award" for energy efficient buildings and high-quality architecture, which places a focus on renewable energy supply for buildings. Passive House buildings which have been certified may be entered into this architecture competition until June 2020. The Award will be presented during the **24th International Passive House Conference on 20 and 21 September 2020 in Berlin**. www.passivehouse-conference.org

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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: among other things due to high-quality thermal insulation, an airtight building envelope and windows with triple glazing. The five basic Passive House principles allow these highly energy 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. Because the heat stays inside the house, active heating is needed only during extremely cold days and only a small amount of energy is required for providing this remaining heating. In summer, the excellent level of insulation ensures that the heat stays outside, therefore active cooling usually isn't necessary in residential buildings. Due to the low energy costs in Passive House buildings, the utility costs are predictable - a basis for affordable homes and social housing. A Passive House building thus 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 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 from the year 2021.

Pioneer project

The first Passive House in the world was built in Darmstadt-Kranichstein (Germany) 28 years ago 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. This flagship 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-Kranichstein. © 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 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 climate protection, 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 headquarters 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

International Passive House Conference

The 24th International Passive House Conference will take place from 20 till 21 September 2020 in Berlin.

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