

Classic, Plus & Premium

How to reach the Passivehaus Homes Standards

"Energy efficiency improves comfort and reduces the risk of structural damage. For new constructions and renovations alike, energy efficient construction ultimately reduces the overall cost burden for the residents of the building," explains the founder of the Passive House Institute, Professor Wolfgang Feist. The Passive House Institute will host the International Passive House Conference and the accompanying Passive House Exhibition later this month.

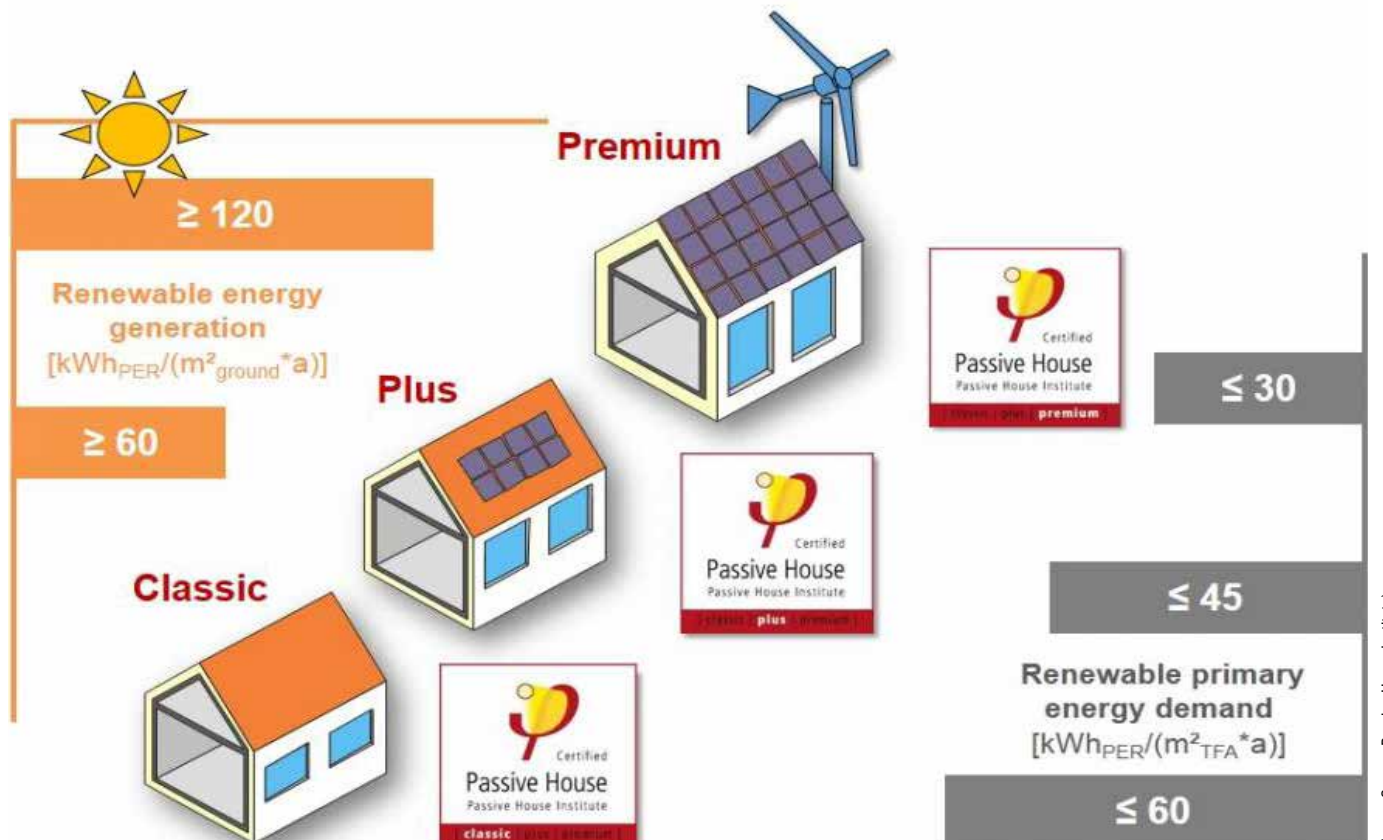


Passive House Institute

Passivehaus is the world's fastest growing standard in terms of popularity, while Passivehouses are amongst best performing, most comfortable and healthy buildings. The previously accepted standards have not taken into consideration new energy supply systems. The Passivehaus Institute developed a new system based on renewable primary energy (PER) and the energy generated by a building. The Passivehaus Institute has introduced three standards for the Passivehaus:

- **The Passive House Classic** - based on the traditional Passive House concept where the certified buildings reduce energy consumption
- **The Passive House Plus** - considers buildings that not only reduce energy costs but also produce as much energy as residents consume. Any additional energy is generated by the building from renewable resources for instance photovoltaics.
- **The Passive House Premium** - far more energy is produced than required to maintain the building. It is a challenging goal for building owners and designers. In the UK there is no Passive House Premium developments.

The heating demand of a Passive House may not exceed 15 kWh/(m²a). In the case of the Passive House Classic category, the overall energy demand



(Image Source: Passive House Institute)



Passive House Institute



for renewable primary energy (PER) will be 60 kWh/(m²a) at the most. A building built to Passive House Plus is more efficient as it may not consume more than 45 kWh/(m²a) of renewable primary energy. It must also generate at least 60 kWh/(m²a) of energy in relation to the area covered by the building. In the case of Passive House Premium, the energy demand is limited to just 30 kWh/(m²a), with at least 120 kWh/(m²a) of energy being generated by the building. In the Passive house the electricity is obtained from the sun and wind, where some of it is consumed and any excess is stored. Thus, storage capacities are necessary for transferring surplus energy to time periods with lower energy gains.

The Passive House Standard already fulfils the requirements for the Nearly Zero Energy Building which will apply for all new buildings in the Euro-

pean Union from 2020, and by the end of 2018 for all new public buildings. The Founder and Director of the Passive House Institute in Darmstadt, Dr. Wolfgang Feist points out the great progress that has been made with regard to energy efficient building components. Great progress with Passive House

components. "For example, today triple glazing costs little more than the old double glazing. This trend is also becoming apparent with all other products which are decisive for Passive House buildings. The necessary additional investment in an energy efficient building is therefore worthwhile even with comparatively low energy prices. The Passive House Conference summarises the insights gained with thousands of examples," says Feist.

The 22nd Passive Conference accompanying specialists' exhibition will take place on 9 and 10 March 2018 in the MOC event location in Munich. Workshops and excursions will take place from 7 till 11 March 2018. Further information can be found on www.passivehouseconference.org

PASSIVE HOUSE EXHIBITION

at the **22ND** INTERNATIONAL
PASSIVE HOUSE CONFERENCE

9 and 10 March 2018 Munich