

## Press Release

27 July 2016

# Step-by-step towards EnerPHit

## Building owners save money with the EnerPHit Retrofit Plan

**Darmstadt, Germany.** Many home and building owners carry out renovations in a step-by-step manner. To avoid unnecessary additional costs, all planned measures for energy retrofits should be coordinated with each other before the first step is implemented. For this advanced planning, the EnerPHit Retrofit Plan has recently been developed by the Passive House Institute.

Many building and home owners are reluctant to bear the costs of a complete retrofit; instead they upgrade only the respective building components that are currently in need of renewal. Retrofits, including those carried out in a step-by-step manner, are an important element for a nearly climate-neutral building stock to meet UN objectives of climate change mitigation. "Before any work starts, an overall plan should be made for all planned current and future retrofit steps. This is the only way to ensure that as a whole all steps will work together and that after the last step is completed the owner can take pleasure in a comfortable building with low energy costs", explains Zeno Bastian of the Passive House Institute in Darmstadt.

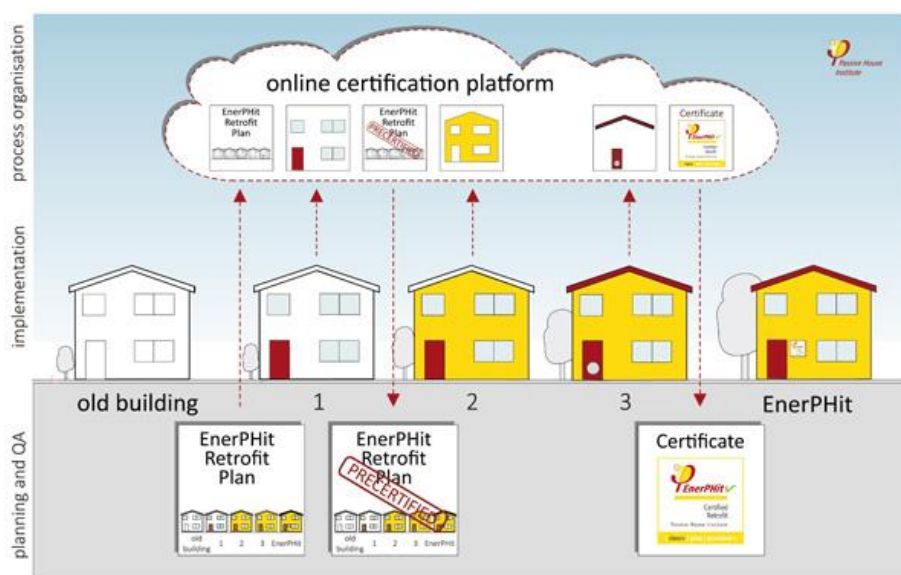


Many owners do renovations on a step-by-step basis. Complete retrofits such as that of the single-family house shown above are the exception. An overall plan for all current and future retrofit steps helps avoiding unnecessary additional costs.

## Worldwide standard for retrofits

The Passive House Institute has developed the EnerPHit Retrofit Plan for this purpose. This EnerPHit Retrofit Plan allows forward-thinking planning of the individual retrofit steps and facilitates the achievement of the EnerPHit Standard. As early as 2010, with its EnerPHit Standard, the Passive House Institute set the energy standard for existing buildings to Passive House levels. This Standard is now used worldwide. For the cool, temperate climate, specific measures include an insulation thickness of at least 20 cm for the building envelope, triple glazed windows with insulated frames, a ventilation system with heat recovery, and the minimisation of thermal bridges.

## EnerPHit ensures reasonable insulation in a retrofitted building



The energy demand of a retrofitted building is typically a bit higher than that of a Passive House new build. This is due to remaining thermal bridges as well as other circumstances typical in existing buildings such as unfavourable building orientation or building preservation restrictions.

First the entrance door and windows, then facade and roof: The EnerPHit Retrofit Plan allows forward-thinking planning of retrofit steps and facilitates achievement of the EnerPHit Standard.  
Photos/Graphics (3): Passive House Institute

## EnerPHit Retrofit Plan integrated in PHPP

The EnerPHit Retrofit Plan has been integrated into the latest version of the planning tool PHPP. With this new additional output file in the Passive House Planning Package (PHPP), architects and specialist planners can coordinate all modernisation steps with each other. During the course of the step-by-step modernisation homeowners can save money in this way. At the same time, with the EnerPHit Retrofit Plan they will keep an overview of the retrofit steps.

## **New courses for PHPP**

Another new feature is the possibility of ensuring a high quality of retrofit work by means of pre-certification. A prerequisite for this is a well-developed and detailed EnerPHit Retrofit Plan. As of autumn 2016, the Passive House Institute will be offering courses again for the Passive House Planning Package (PHPP).



The EnerPHit Retrofit Plan is integrated in the latest version of the planning tool PHPP. This version also contains an IP version with imperial measurement units for worldwide planning.

### **New features of the latest version of the PHPP 9.6a at a glance:**

- ▶ integrated EnerPHit Retrofit Plan
- ▶ updated climate data and Passive House components
- ▶ IP version with imperial measurement units for worldwide planning
- ▶ simple calculation of variants in the IP version
- ▶ export function of designPH in IP PHPP
- ▶ improved compatibility with Macintosh computers

### **More information at:**

[www.passivehouse.com](http://www.passivehouse.com)

[www.passivhausplaner.eu/index.php?page\\_id=334&level1\\_id=276](http://www.passivhausplaner.eu/index.php?page_id=334&level1_id=276)

The development and implementation of the EnerPHit Retrofit Plan was supported by the European Union in the framework of the EuroPHit Project ([www.europhit.eu](http://www.europhit.eu)).

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### **Passive House**

A Passive House is a building that due to its excellent design and construction, stays at a comfortable temperature year round with minimal energy inputs, no matter the climate or geographical region. Passive House buildings make efficient use of “passive” sources, such as sun and heat recovery to cover remaining needs, and use similar techniques such as shading to keep them comfortably cool. A Passive House therefore consumes around 90 percent less heating energy than existing buildings and about 75 percent less than an average new build.

### **Pioneer project**

The first Passive House was built 25 years ago in Darmstadt-Kranichstein, Germany. Since the first families moved in in 1991, it has stood as the global pioneer project for the Passive House Standard. In the spring of 2016, building physicists undertook intensive studies on this first building to find the building was still performing as designed and that the low heating energy demand remained.

### **Passive Houses worldwide**

Meanwhile, there are Passive Houses buildings of all types. In addition to residential - and office buildings there are also kindergartens and schools, hospitals, sports halls, swimming pools and factories as Passive House buildings. Worldwide, since 1991 over 65,000 Passive House projects have been built. The interest in Passive House is increasing. Considering the resource consumption of the industrialized countries and the need to reduce greenhouse gas emissions, a new building or retrofit to the Passive House Standard appears increasingly as an attractive alternative for municipalities, businesses and private individuals.

### **Passive House Institute**

The Passive House Institute is an independent research institute that has played an especially crucial role in the development of the Passive House concept - the only internationally recognised, performance-based energy standard in construction. The Passive House Institute is the organizer of the International Passive House Conference and the related exhibition.

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