

The new Passivhaus classes

classic → plus → premium

Speaker: Jessica Grove-Smith
Passive House Institute, Darmstadt, Germany
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This document is a shortened version of the presentation held at the UK Passivhaus Conference 2014.

The full version is available to all members of the International Passive House Association (iPHA), and therefore all members of its affiliate the Passivhaus Trust, on iPHA's homepage www.passivehouse-international.org

Click on this [LINK](#) to access the full presentation.

It is an approved answer to **solve the energy problems** in the building sector. PHI is as a safeguard of the standard.



Don't compromise on efficiency!

PH not ambitious
enough ?!

Efficiency comes first!
Whatever you do, don't compromise
on the quality.

Next step: Cover the energy demand
from renewable sources.

Passive House: Success since 1991

Passive House
too ambitious ?!

It is not !!
But there can be difficult
circumstances that lead to a
close miss

Passive House Premium
 15_{heating} kWh/m²a
+++ system efficiency
+++ renewables

Passive House Plus
 15_{heating} kWh/m²a
+ system efficiency
+ renewables

Passive House Classic:
 $15_{\text{heating}} / 120_{\text{PE}}$ kWh/(m²a)

$30_{\text{heating}} / 140_{\text{PE}}$ kWh/(m²a)
**THIS IS NOT A
PASSIVE HOUSE!!**
“Energiesparhaus”
Energy conservation building

The new PH classes

How to rate a building's energy efficiency?

a) Building performance → **Useful energy !!!**

PH: 15 kWh/(m²a)

b) System performance i.e. overall efficiency

and environmental impact

(climate change, resource availability etc.)

? energy storage ?

→ **Primary Energy ... ?**

→ **CO₂ equivalent ... ?**

? nuclear energy ?

? renewables + non-renewables?

? limited resources?

How to rate a building's energy efficiency?

*P*rimary *E*nergy *R*enewable - *PER*

PHIs suggestion:

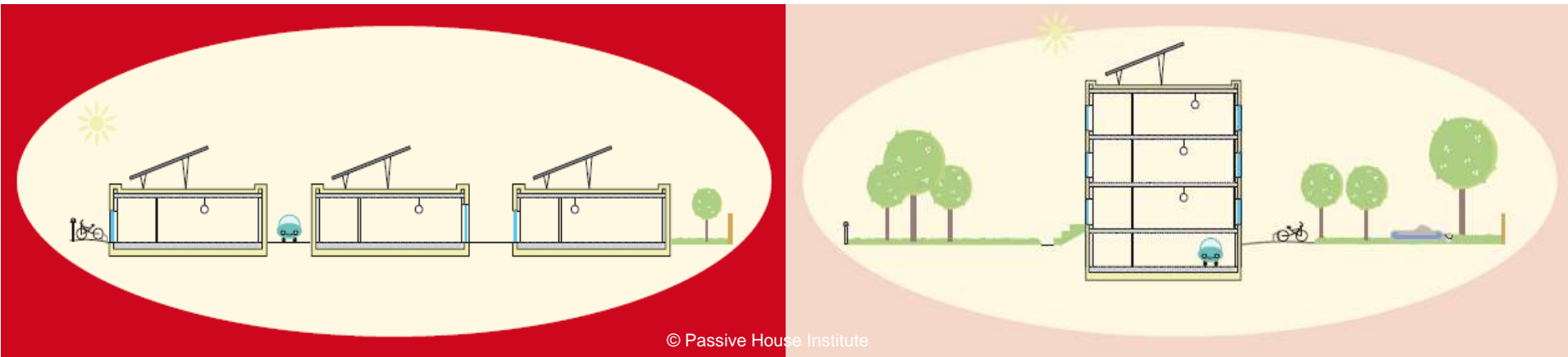
- **Rating based on a scenario,
in which only renewable power sources are used.**

$$\text{PER} = \frac{\text{Renewable Energy Supply}}{\text{Final Energy Demand}}$$

How to rate on site energy production?

- The **net-zero** and **plus-energy** approaches are misleading
- **Multi story buildings are discriminated** by this system, because they have small surface area /TFA
- PHIs suggestion:

**Take the buildings ground area
as a reference for energy production.**



PH classes : how and when?

→ Passive House Planning Package, Version 9



- Introduction of PH classes based on PER - demand
- PE demand calculation will still be included for reference



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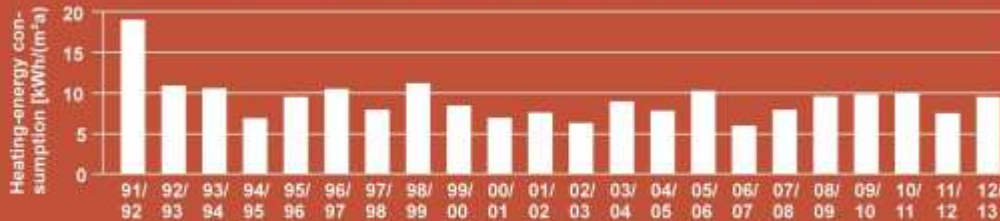


www.passivehouseconference.org

The Passive House concept



- ✓ Comfortable
- ✓ Energy efficient
- ✓ Cost effective
- ✓ Sustainable
- ✓ User friendly
- ✓ Easy to apply
- ✓ NZEB-ready



success since 1991



*Passive House
Institute*

Thank you!

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