

# Building the future – sustainably!

Online Press Conference

Prof. Dr. Wolfgang Feist, Passive House Institute



Organised by:

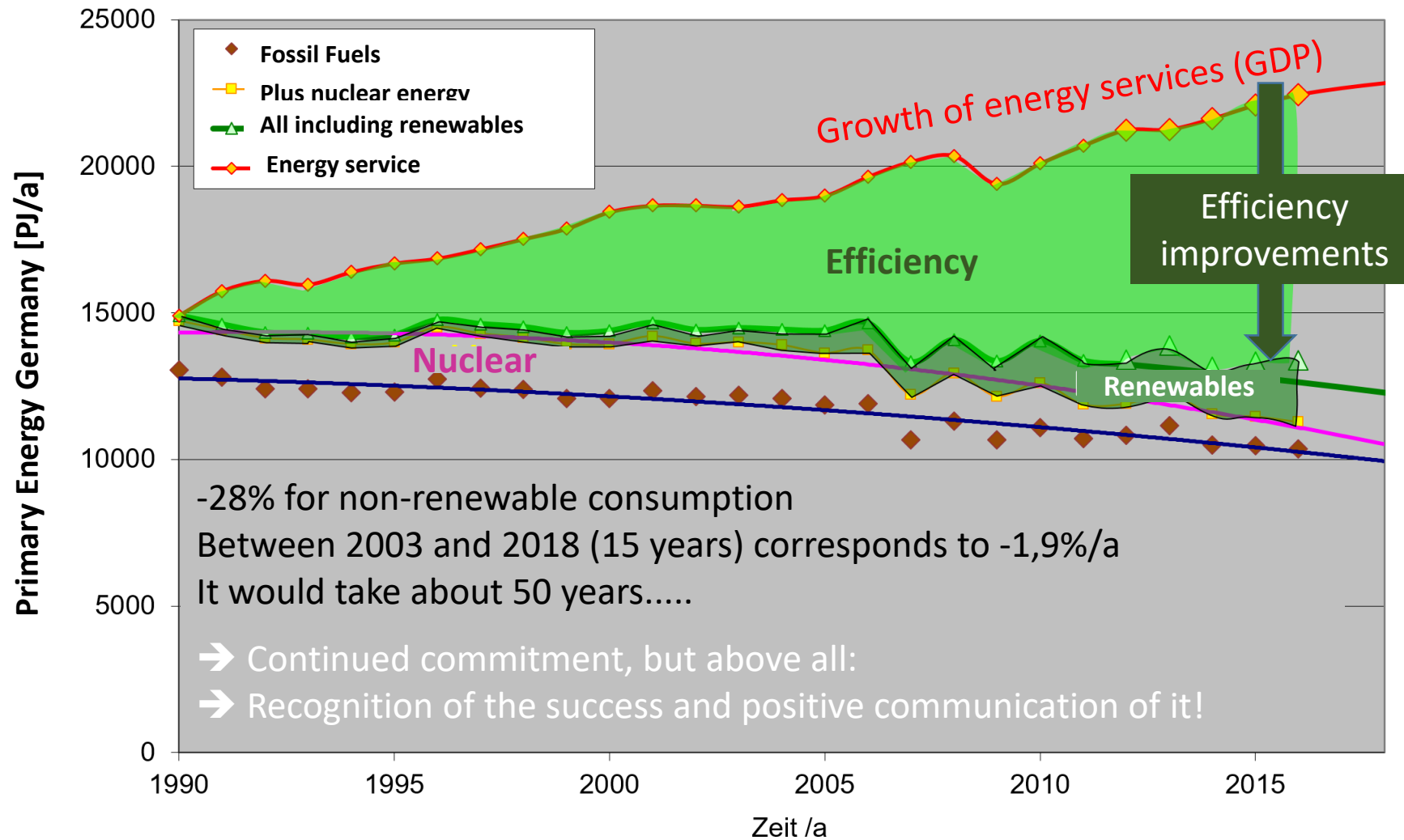


*"It's the only home we have... there is no hint that help  
will come from elsewhere to save us from ourselves"*

---

Carl Sagan, "Pale Blue Dot", Cosmos, 1994





Yes, the climate crises can be solved! Example: The German Energy Transition (Energiewende)

# How do we achieve high efficiency?



Old, inefficient technology (2003)

**76 Watt**

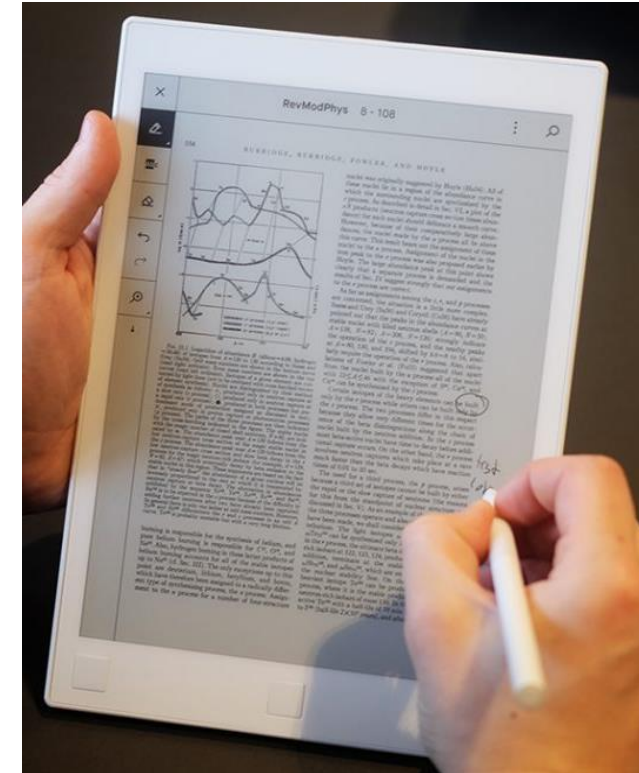
**- 74%**



More efficient technology (2013)

**20 Watt**

**- 95%**



Highly efficient technology (2018)

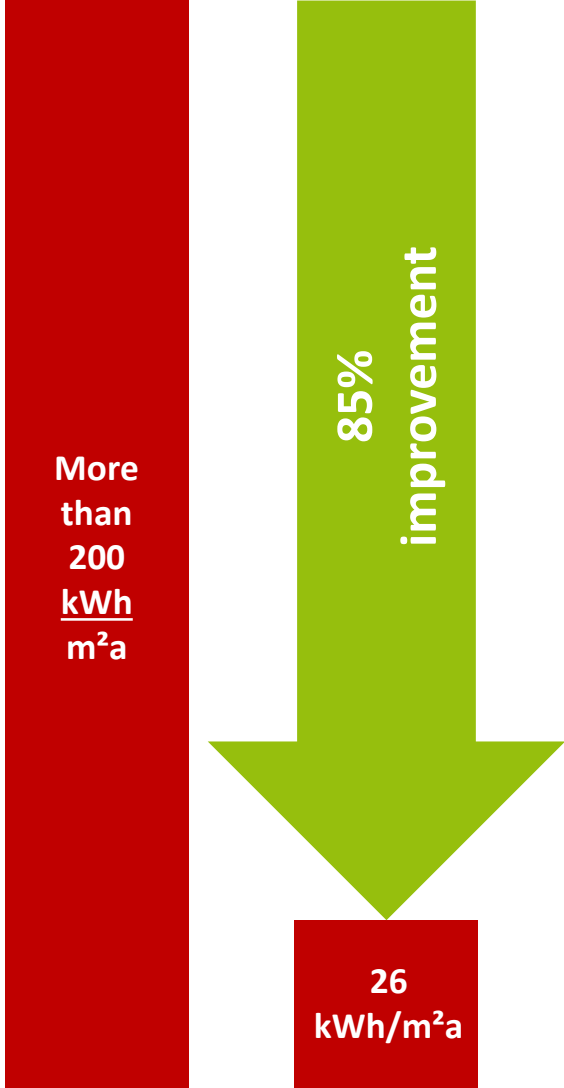
**< 1 Watt**

**- 98,7%**

# Retrofitting: EnerPHit



Before

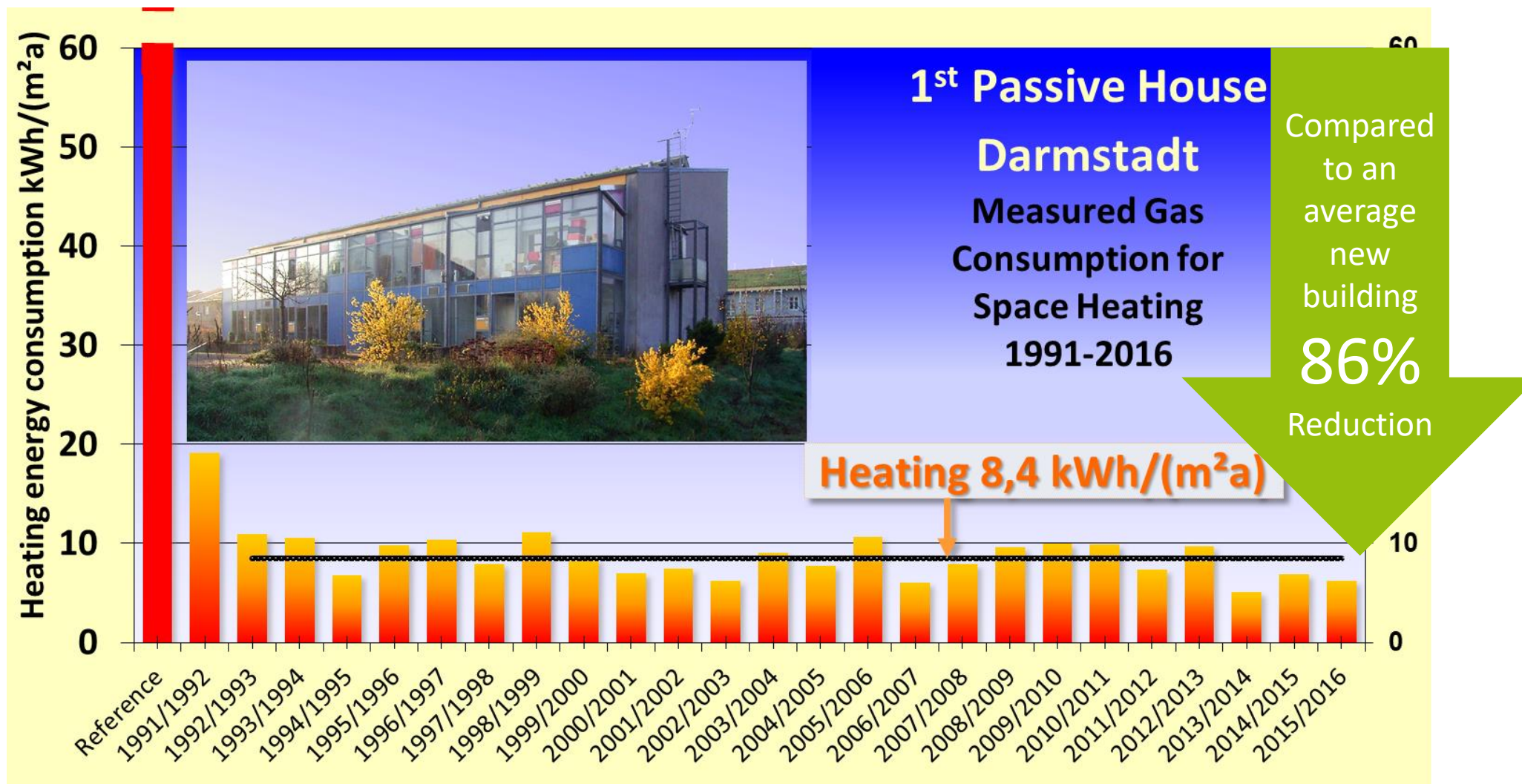


After





## Example: Heating





## Efficiency and Renewable: Measurements in PH-Plus



### Passive House Plus Kranichstein

Energy consumption of end-of-row terrace house:

**Heating Energy Consumption:** 10.2 kWh/(m<sup>2</sup>a)

**DHW-Energy Demand:** 11.3 kWh/(m<sup>2</sup>a)

**HH-Electricity Consumption:** 11.4 kWh/(m<sup>2</sup>a)

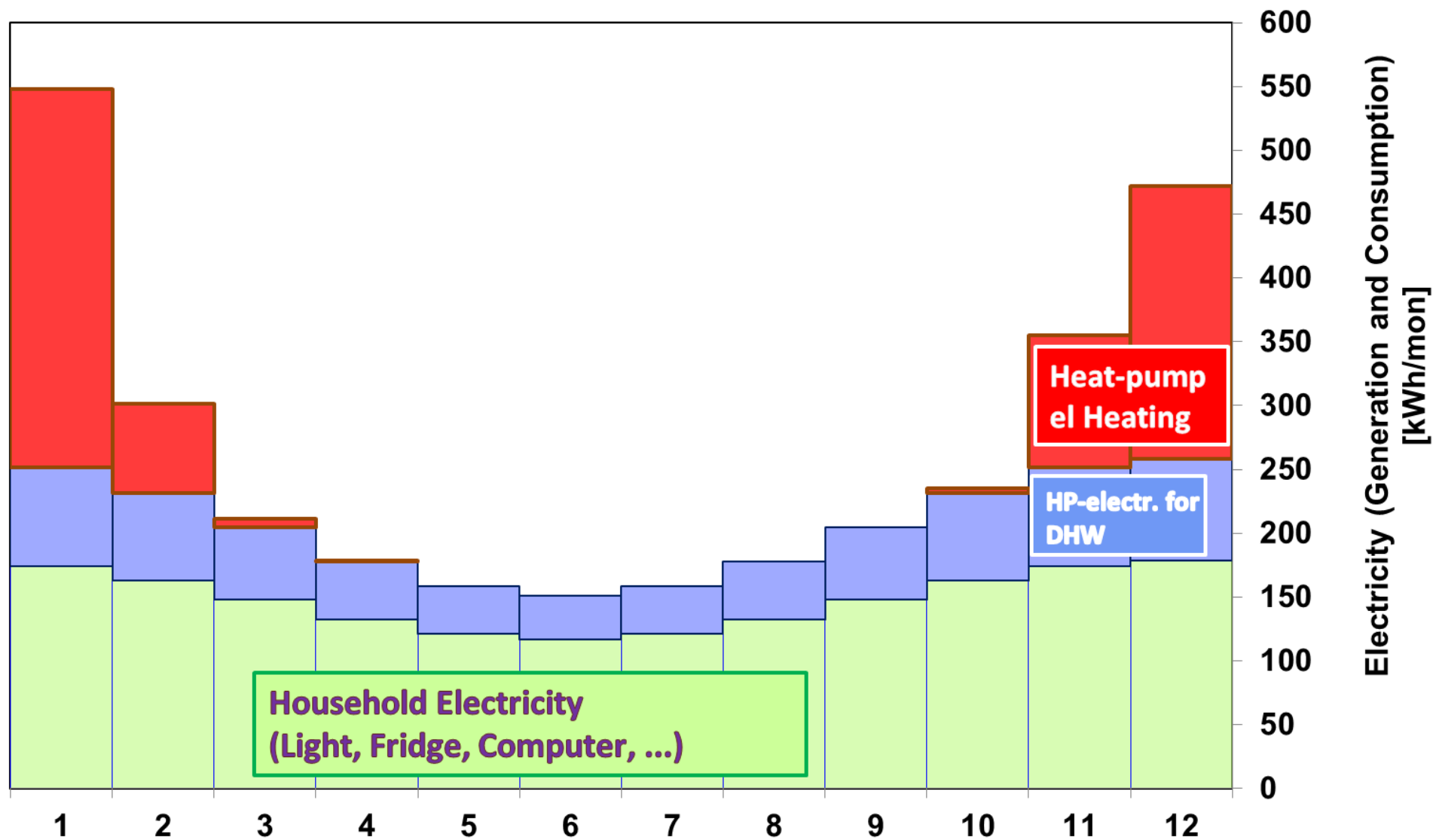
**Heating: Mini-Split-Heatpump** 2 kW

**DHW: Split-Heatpump** 0.5 kW 260 l

**PV-system: On roof + facade (26,6 m<sup>2</sup> 4 kW<sub>p</sub>)**

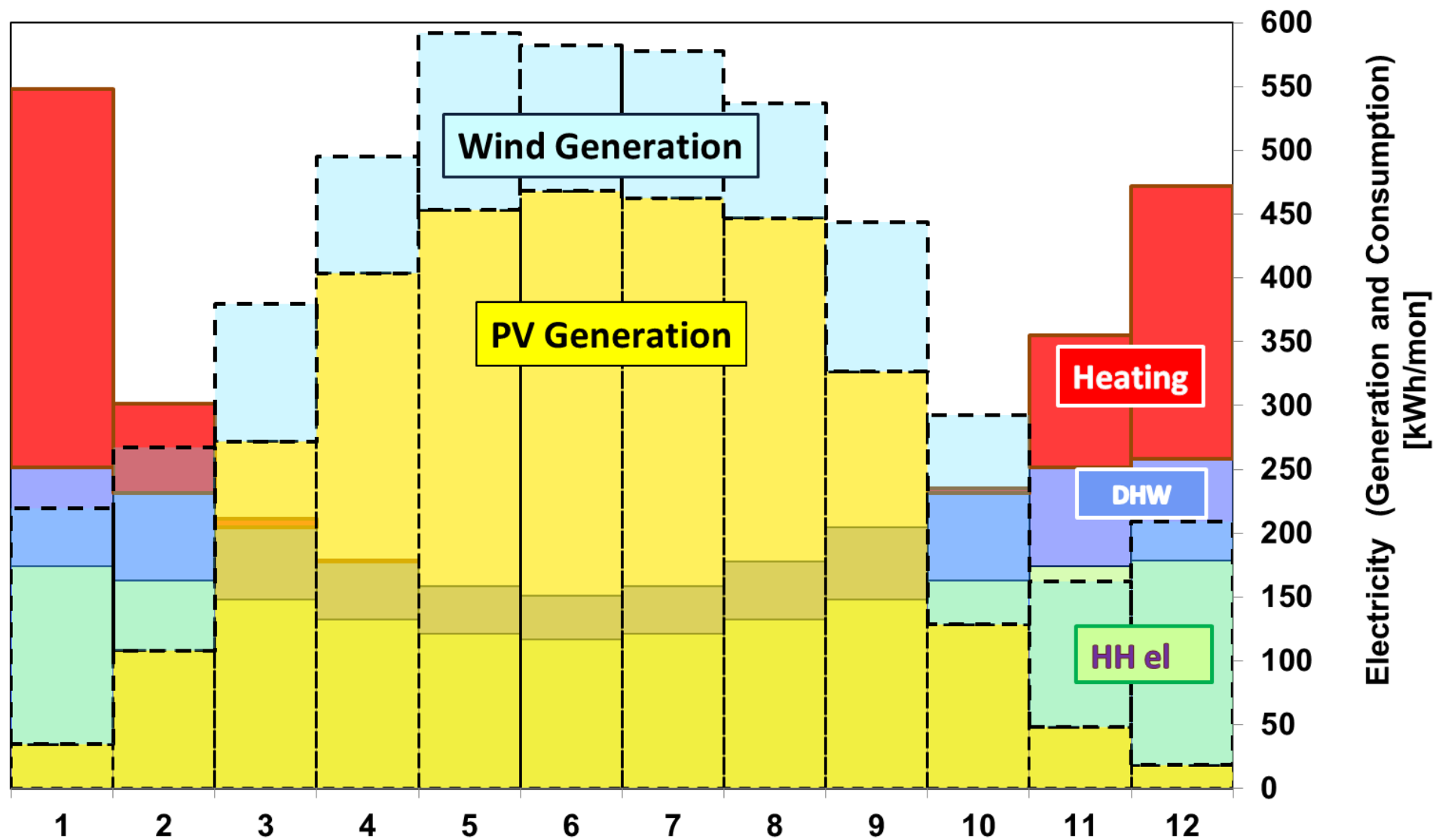


## Efficiency and Renewable: PH-Plus

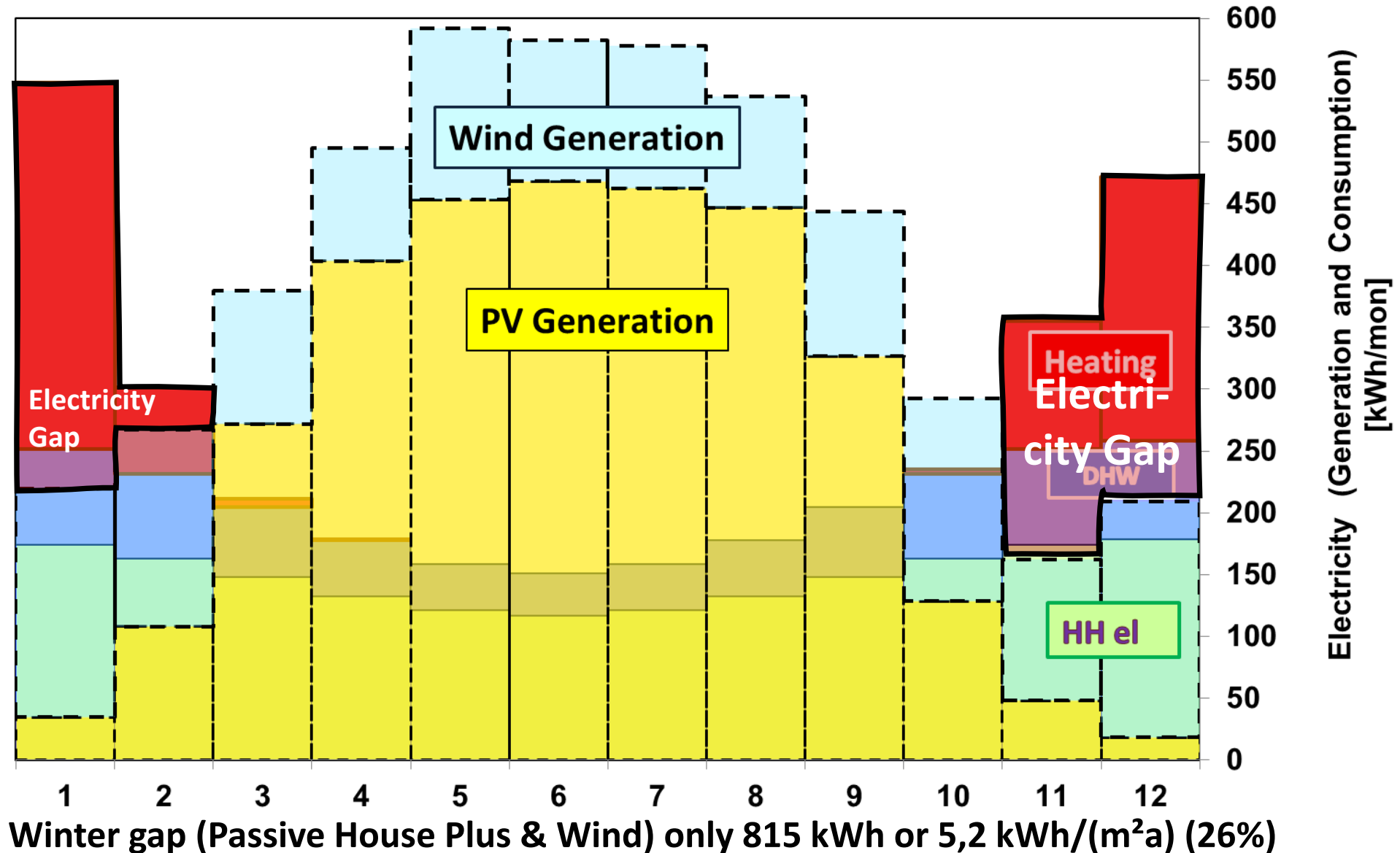




## Efficiency and Renewable: PH-Plus & wind



## Efficiency and Renewable: PH-Plus & wind





Architect Björn Kierulf / Bratislava; production in Vilnius, Lithuania  
Ecococon™ – Certified straw-prefabricated Passive House Construction System

➤ **Passive House: + Renewables + Sustainable materials (Timber / Straw)**

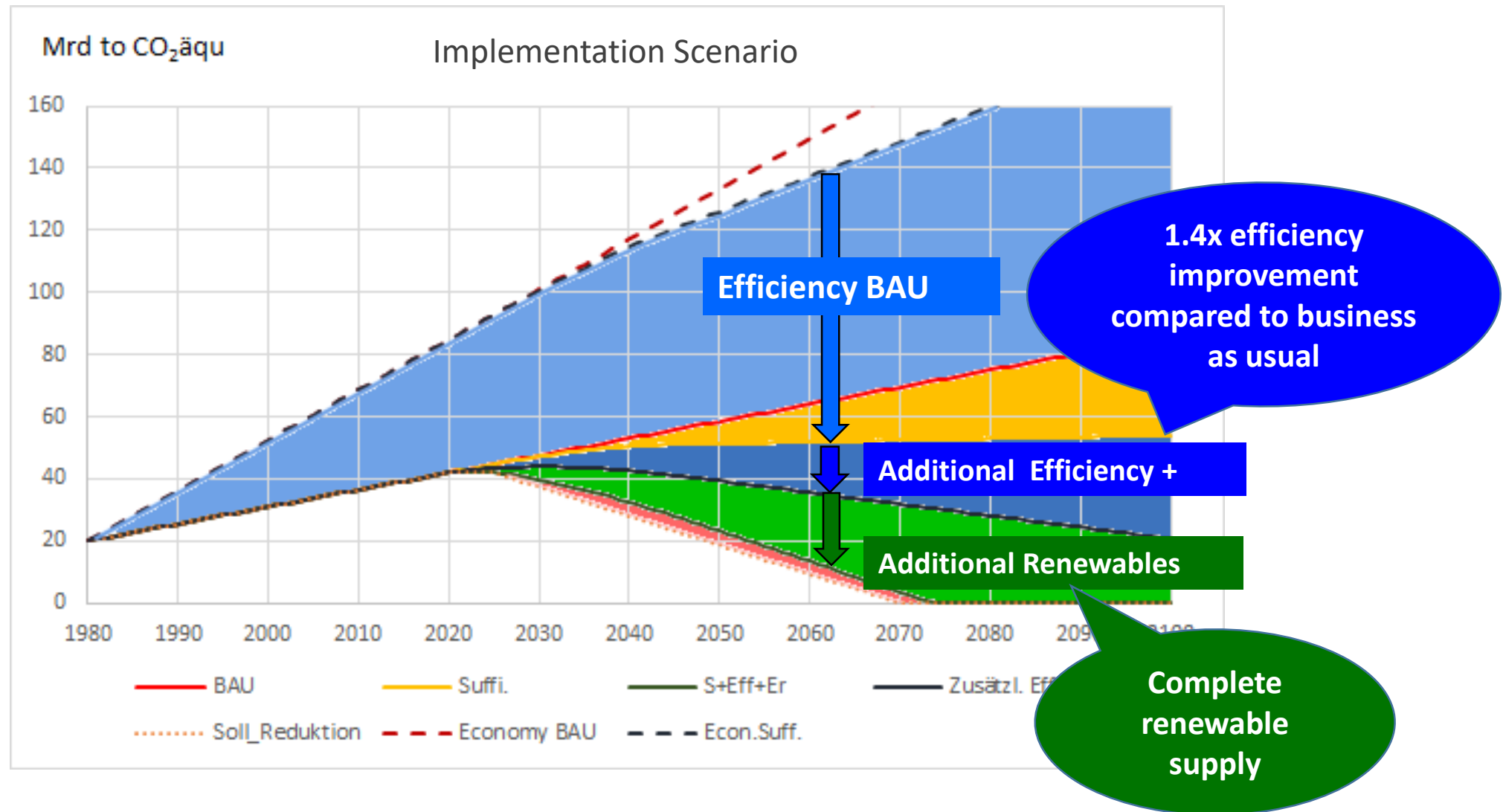


## Passive House for affordable residential buildings



Savings  
 $45\text{kWh}/(\text{m}^2\text{a})$   
@83 €/m<sup>2</sup>





- Scenario based on “sufficiency” economy 1%/a from 2040
- + realistic consequence of efficiency improvements of all services
- + realistic deployment of renewable energy

## Component certification

These components are:

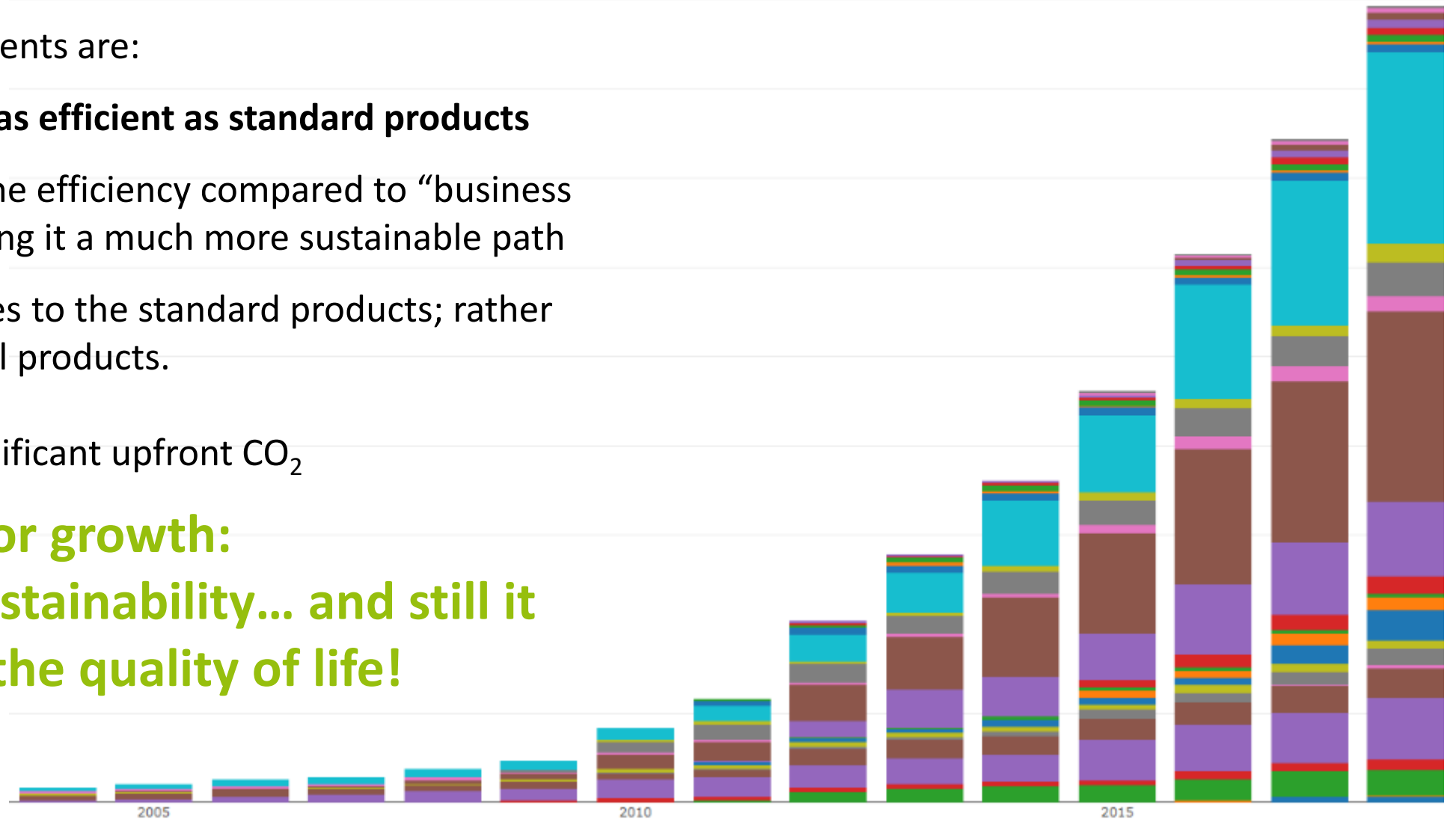
### **At least twice as efficient as standard products**

This doubles the efficiency compared to “business as usual” making it a much more sustainable path

Use alternatives to the standard products; rather than additional products.

Result: No significant upfront CO<sub>2</sub>

**Example for growth:  
Creates sustainability... and still it  
improves the quality of life!**



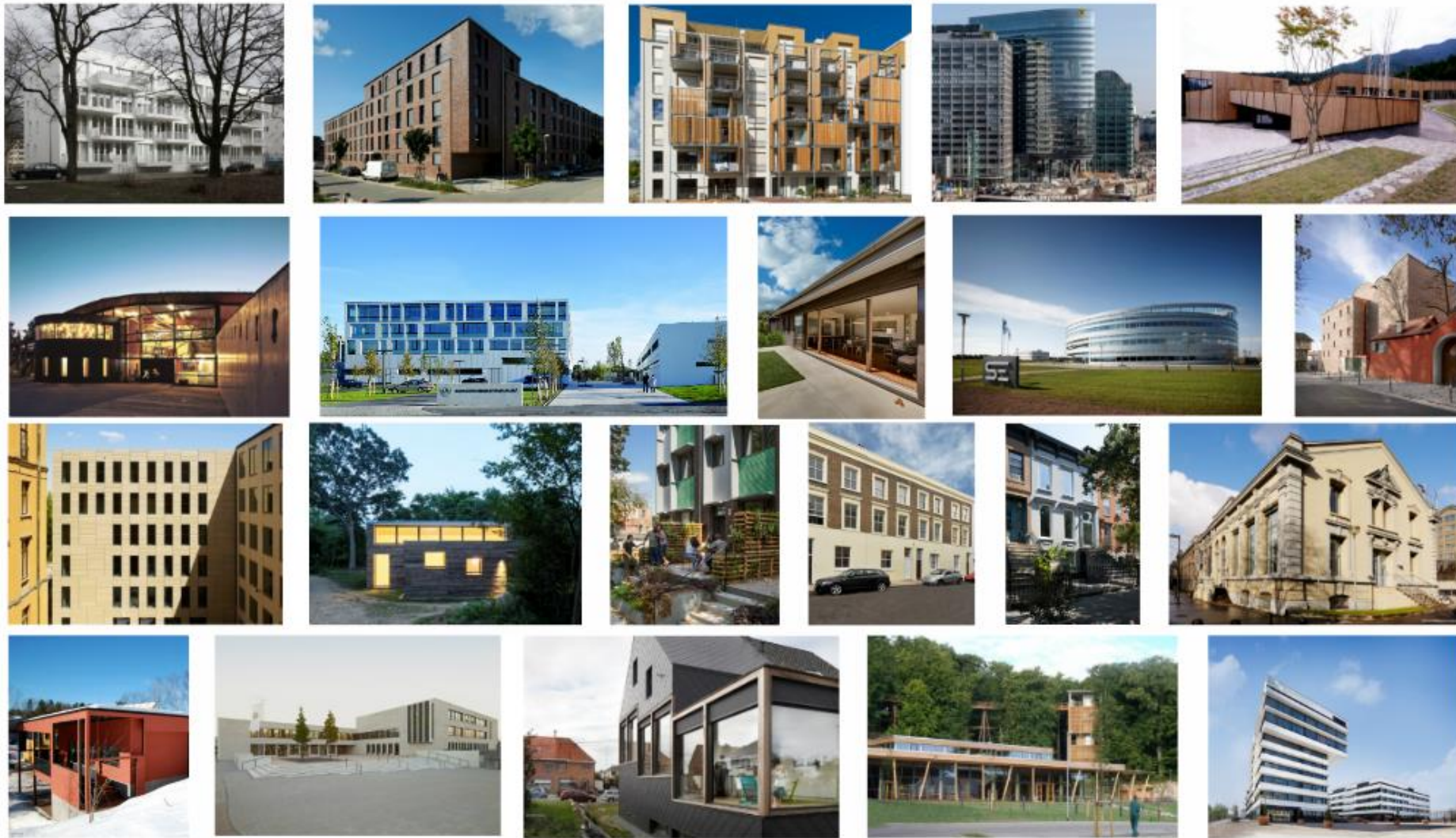


## Passive House:

- Optimal comfort
- Healthy indoor air
- Reduced total cost
- Solution for climate protection
- Sustainable growth
- Promoting participation and understanding

win<sup>6</sup>

## Passive House: From idea & research...



... to a wide spread and international successful solution





Belfield Homes / Philadelphia, PA, USA / *Plumbob*

**Terrace Homes** – *Affordable housing in the US*

Photo credit: Sam Oberter Photography





Photo credits: VArquitectos



**2018:** Bolueta Tower Bilbao - Spain  
ca. 12 900 m<sup>2</sup>, residential  
**ID 5233, Images VArquitectos**

High-rise, Spain

## Passive House Development, Bahnstadt Heidelberg

New city district “Bahnstadt”, Heidelberg  
Mixed-use, residential & non-residential for 6000 residents  
Photos: Passive House Institute





## China is implementing Passive House 中国被动房项目实施

Photo credits: Longfor Group and Orient Sundar Group



The Bahnstadt, Gaobedian China





## Passive House Training

- Worldwide training / network of accredited course providers
- Worldwide certification system for building professionals
- Course material / e-learning modules in different languages



*Experience  
the comfort for  
yourself!*



## International Passive House Open Days

PASSIVE HOUSE BUILDINGS ACROSS THE WORLD OPEN THEIR DOORS



Talk about Passive House with residents and construction professionals

Experience a Passive House for yourself:

- Superior comfort
- Low heating & cooling costs
- Fresh air day and night
- Complemented by renewable energy
- Suitable for new builds and retrofits

Please visit [www.passivehouse-international.org](http://www.passivehouse-international.org) for further information. Participating buildings will be listed on [www.passivehouse-database.org](http://www.passivehouse-database.org)

Two dates:

Mid-year event 26-28 June 2020

Main event 6-8 November 2020

The mid-year event will be a video edition

Make your building the star!

Shoot a video of your Passive House project and share it with the world!

Submit your video tours until June 19, 2020 on the website [www.passivehouse-international.org](http://www.passivehouse-international.org)



## International Passive House Open Days

PASSIVE HOUSE BUILDINGS WORLDWIDE OPEN THEIR DOORS

[Watch  
the  
sample  
video](#)

**VIDEO  
EDITION**

**Mid-year event**

**26–28  
June 2020**





## Passive House Award 2020

2020 Passive House Award - International architectural competition for highly energy efficient buildings.

Building Passive means building better!

An international jury will examine the entries and judge them on criteria such as design, cost-effectiveness, innovation, energy supply, and sustainability.

The deadline for the 2020 Passive House Architecture Award has been extended. The ceremony will be held at the 25th International Passive House Conference in 2021. The application portal will remain open regardless and project submissions are possible at any time.

## 24th International Passive House Conference

Lectures | Exhibition | Networking | Building Tours | Workshops

Building the future –  
sustainably!

**Virtual Conference**

Building in Berlin © Daniel Oelschläger Architekten Partnerschaft

**24<sup>TH</sup> INTERNATIONAL PASSIVE  
HOUSE CONFERENCE 2020**

**#24intPHC**  
**[www.passivehouseconference.org](http://www.passivehouseconference.org)**

Can we still solve the climate crisis?

DEFINITELY: If we soon decide to act meaningfully

AND: We then act in accordance with this decision.



*“To me, it underscores our responsibility to deal more kindly with one another, and to preserve and cherish the pale blue dot, the only home we have.”*

---

Carl Sagan, “Pale Blue Dot”, Cosmos, 1994