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Legal environment and incentives for retrofitting: The German example

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Contents

- Background (statistics on buildings, policy objectives, actual situation)
- Regulatory law (Energy Conservation Regulations; Renewable Energy Heat Act)
- Financial assistance (KfW programmes)
- Way forward (timetable, reports)



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Statistics on buildings

18 million residential buildings with 40 million dwellings
3/4 of them are in need of energy-efficiency improvement

1.5 million non-residential buildings

180,000 – 200,000 public properties

Trend:

Specific heating energy consumption is falling,
specific electricity consumption is rising



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The EU's energy and climate change policy

- Increase energy efficiency by at least **20%** by 2020
- Reduce greenhouse gas emissions by **20%** compared with 1990 levels
- Increase renewable energy's share of total energy consumption to **20 %** by 2020



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German approach

- Challenge (= statutory requirements)
- Support (= financial incentives)
- Inform (= advice/publicity)



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Challenge

Basic principle:

Statutory requirements only call for what is economically
feasible



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The value for money imperative

(Section 5 of the Energy Conservation Act)

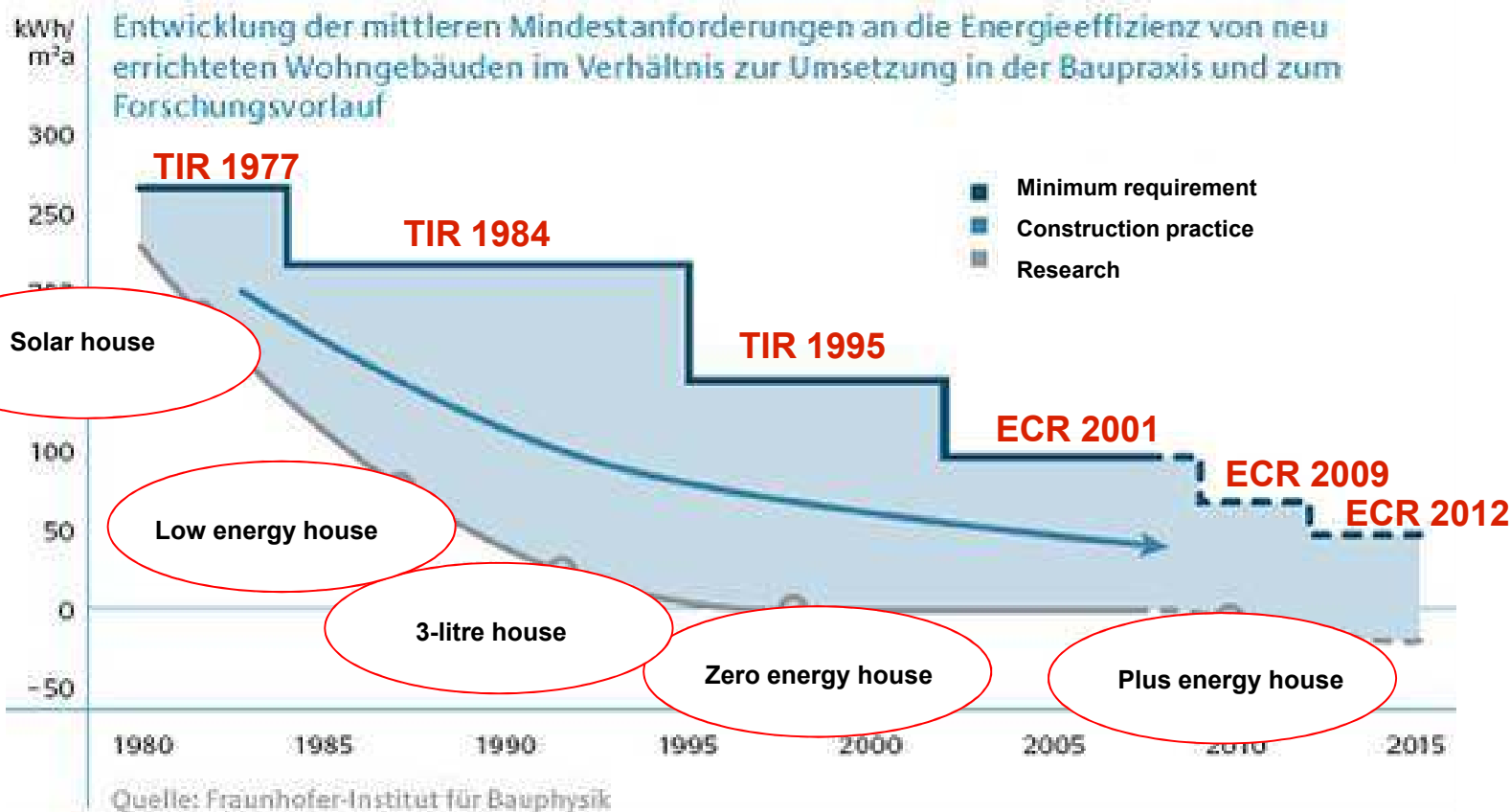
The costs of implementing energy conservation measures must, in general, be recouped within the lifetime of these measures in the form of reduced energy costs



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History of the Thermal Insulation Regulations (TIR) and Energy Conservation Regulations (ECR) in Germany

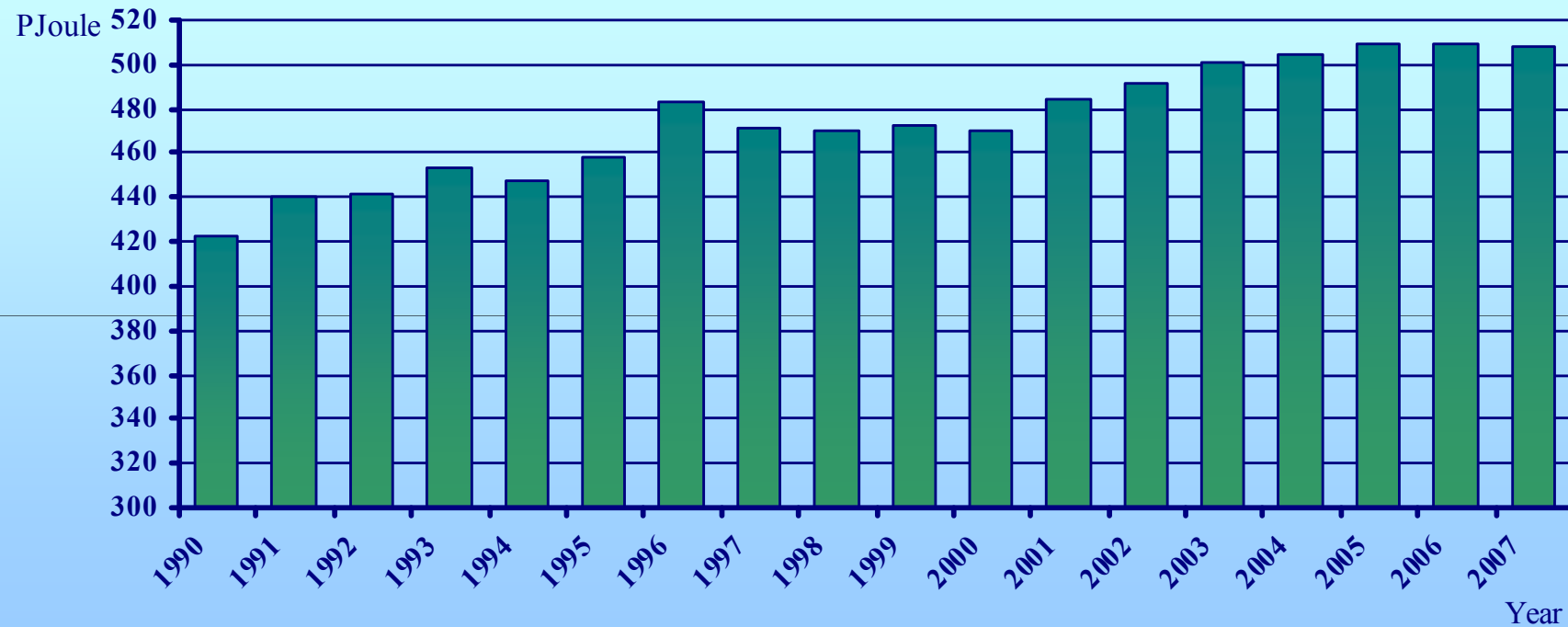


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Electricity consumption of households in Germany

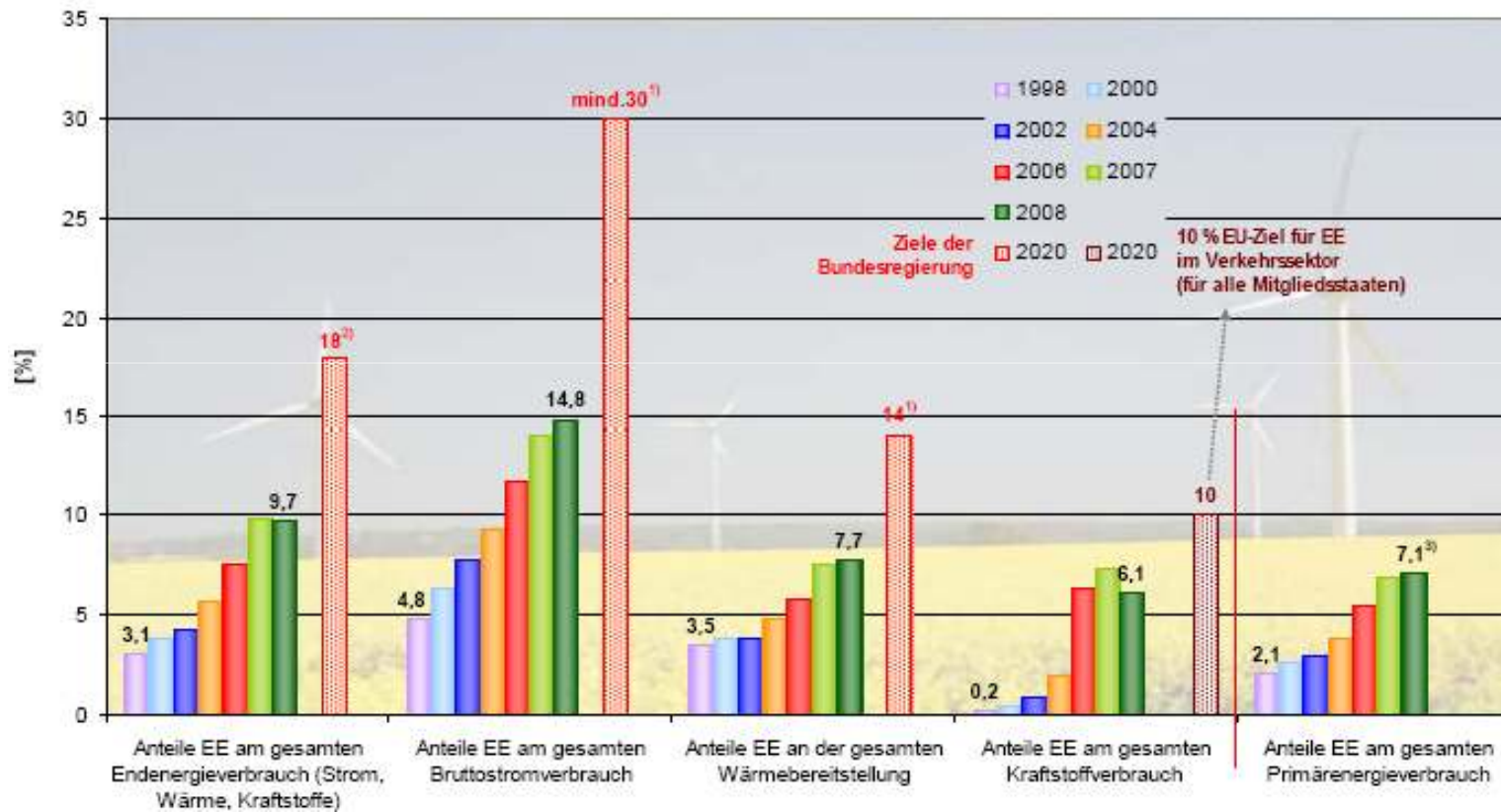


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Renewable energy's share of energy provision in Germany



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Energy Conservation Regulations 2009 since 1 Oct 2009

- Requirements tightened by an average of 30%
- Better enforcement
- Electric storage heaters to be phased out



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Energy Conservation Regulations 2009

since 1 Oct 2009

Provisions for existing buildings

The following applies to almost all work to improve the building shell:
Provisions apply if structural work is being carried out anyway
(modifications, extension, upgrading)

- Requirements to be met by U-values for individual components such as roof, window, etc.:

Example: Roof leaks and has to be renewed. When it is renewed, a certain degree of thermal insulation has to be achieved.

- Primary energy requirements must not exceed 140 % of the level for new buildings



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Energy Conservation Regulations 2009 since 1 Oct 2009

Provisions for existing buildings

Provisions on subsequent improvement without special reason
mainly in the field of heating and air conditioning

- Control engineering
- Replacement of old oil and gas-fired boilers



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Renewable Energy Heat Act since 1 Oct 2009

Obligation to use a proportion of renewable energy in the provision of heating to new buildings

- 15% solar energy or
- 30% biogas or
- 50% solid or liquid biomass or
- 50% geothermal power or ambient heat



The federal states may also introduce requirements to be met by existing buildings



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Support

- Low-interest loans
- Grants
- Tax write-offs



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Support programme

Energy efficient building and renovation (programme to reduce CO₂ emissions from buildings)



- Level of funding for **2009: around € 2.2 bn (2006 – 2009: total of around € 6 bn), 2010 and 2011: € 1.5 bn annually**
- Energy-efficient refurbishment or construction of over 1.42 million dwellings
- Reduction in CO₂ emissions of more than 3.8 million t/year
- Cumulative heating cost savings resulting from the measures: € 1.55 bn/year



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Recast Energy Performance of Buildings Directive

- “Nearly zero energy building” – Standard for new buildings by 1 January 2021 at the latest, for public buildings as of 1 January 2019
- Nearly zero energy building:
“The nearly zero or very low amount of energy required should to a very significant extent be covered by energy from renewable sources, including renewable energy produced on-site or nearby”



Recast Energy Performance of Buildings Directive

Energy performance certificates:

- Quality assurance by establishing national control mechanisms. Competent authorities/bodies to make a random selection of certificates (to check their plausibility, possibly also including an on-site inspection of the building)
- Threshold for compulsory display of certificates (public buildings) will be lowered to 500 m², then to 250 m²



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Recast Energy Performance of Buildings Directive

Energy performance certificates:

- Energy performance indicator (still to be determined) must be stated in sale or rental advertisements



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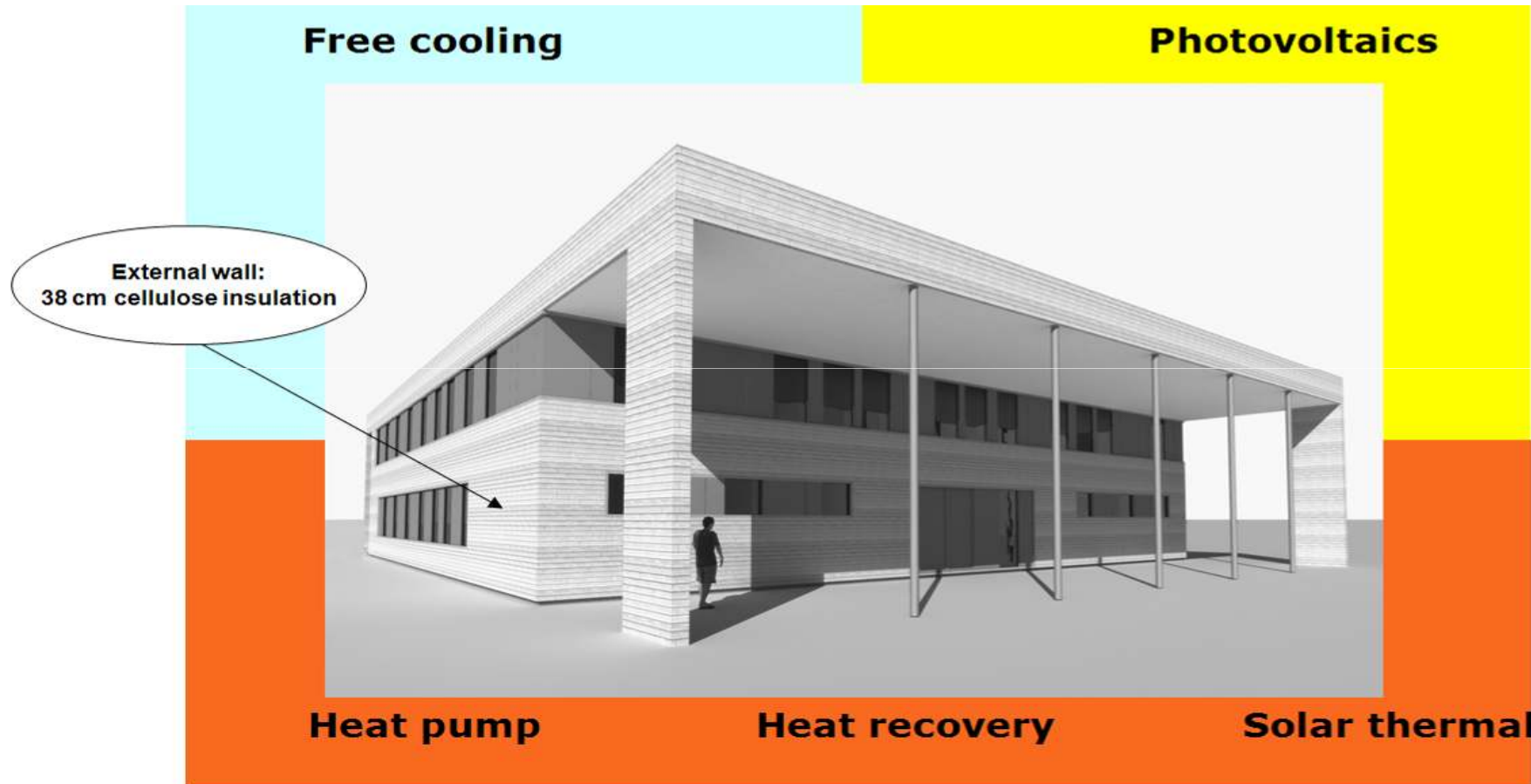


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The Federal Government's zero energy house pilot project

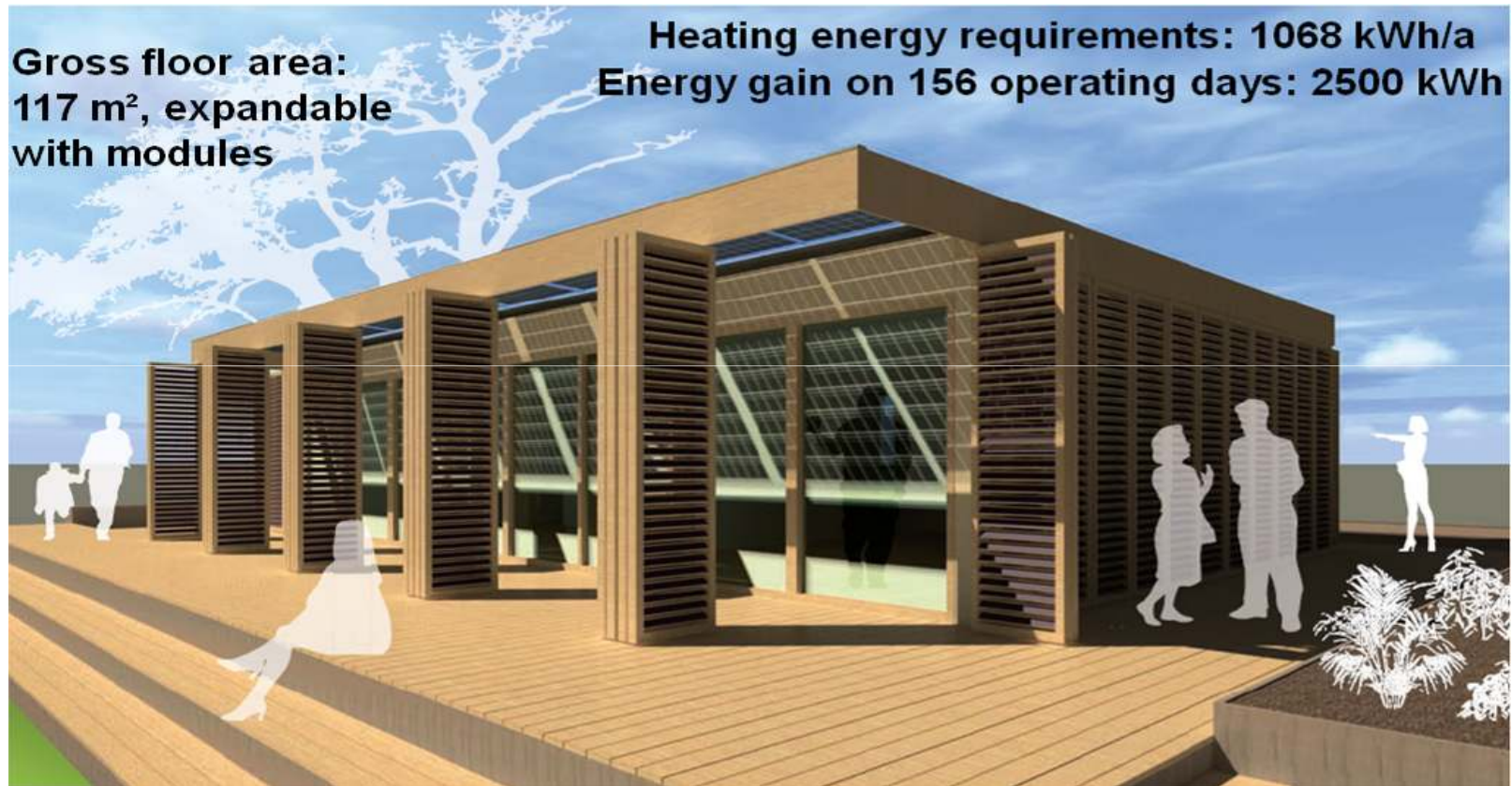


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The plus energy house



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