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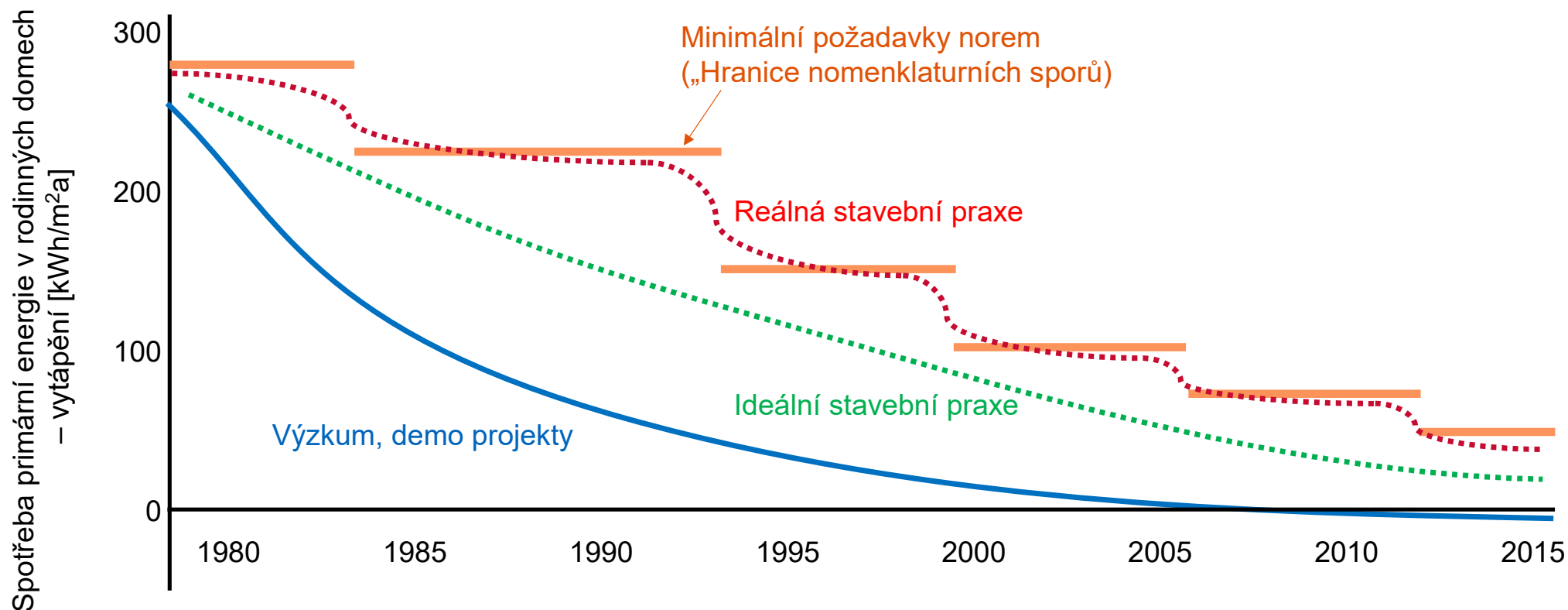
UNIVERZITNÍ CENTRUM
ENERGETICKY EFEKTIVNÍCH
BUDOV

BUDOUCNOST ENERGETIKY BUDOV: TRENDY VE SVĚTĚ A V ČR

doc. Ing. Lukáš Ferkl, Ph.D.
ředitel ČVUT UCEEB



HISTORIE ÚSPOR ENERGIÍ V BUDOVÁCH – NĚMECKO

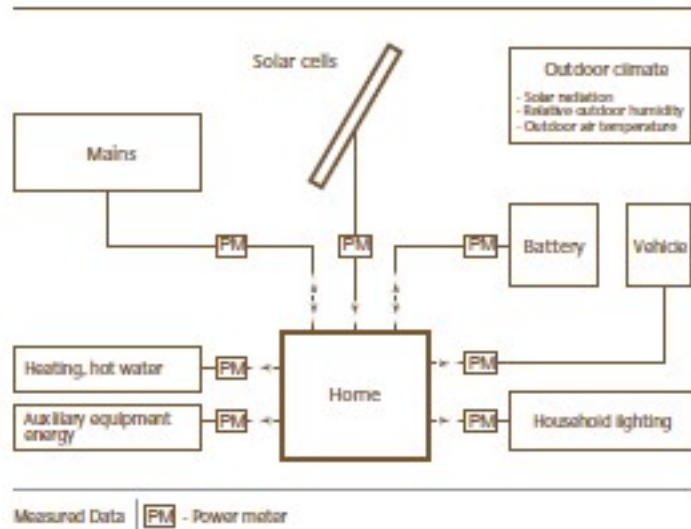




PILOTNÍ PROJEKT – BERLÍN



ELECTRIC PROVISION

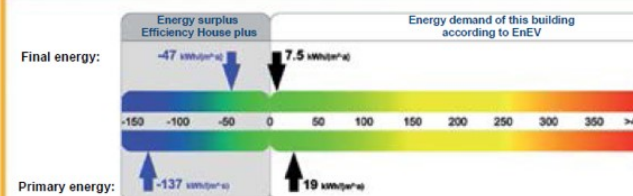


ENERGY CERTIFACTE¹⁾ for residential buildings according to section 17, subsection 4 German Energy Saving Ordinance (EnEV)

Calculated energy demand of the building Address, building part Fasanenstraße 87, 10623 Berlin (Germany)

2

Energy surplus Efficiency House plus and energy need acc. to EnEV



Method used for calculating the energy demand
Acc. to Efficiency house plus assessment (DIN V 18500)

Energy surplus
Final energy -47.4 kWh/(m²·a)
Primary energy -137.4 kWh/(m²·a)

Requirements acc. to EnEV²⁾

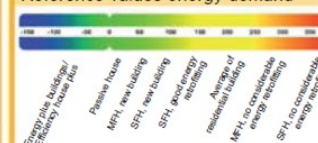
Primary energy demand
Actual value 19.4 kWh/(m²·a) Required value 85.9 kWh/(m²·a)
Energy quality of the building envelope H
Actual value 0.33 W/(m²·K) Required value 0.40 W/(m²·K)

Final energy in kWh/(m²·a)

Energy carrier	Annual energy demand acc. to EnEV				Additional elements			Final energy surplus (total)
	Heating	Hot water	Auxiliary equipment ³⁾	Total	Domestic appliances	Electricity fed into the grid	Electricity fed into the grid	
electricity	6.5	0.97	-	7.5	0.62	3.5	-59.0	-47.4



Reference values energy demand



Commentary on calculation methods

The calculations are based on extended EnEV verification according to DIN V 18509, including a normalized energy demand for lighting and domestic appliances, excluding surplus renewable energy that was generated within the balancing zone and fed into the grid (as set out in BMUB brochure 'What makes an Efficiency House Plus?'). Due to standardized boundary conditions in particular, the reported values do not allow to draw conclusions with regard to the actual energy consumption. The given demand values are specific values determined per square metre of usable floor areas (AN).

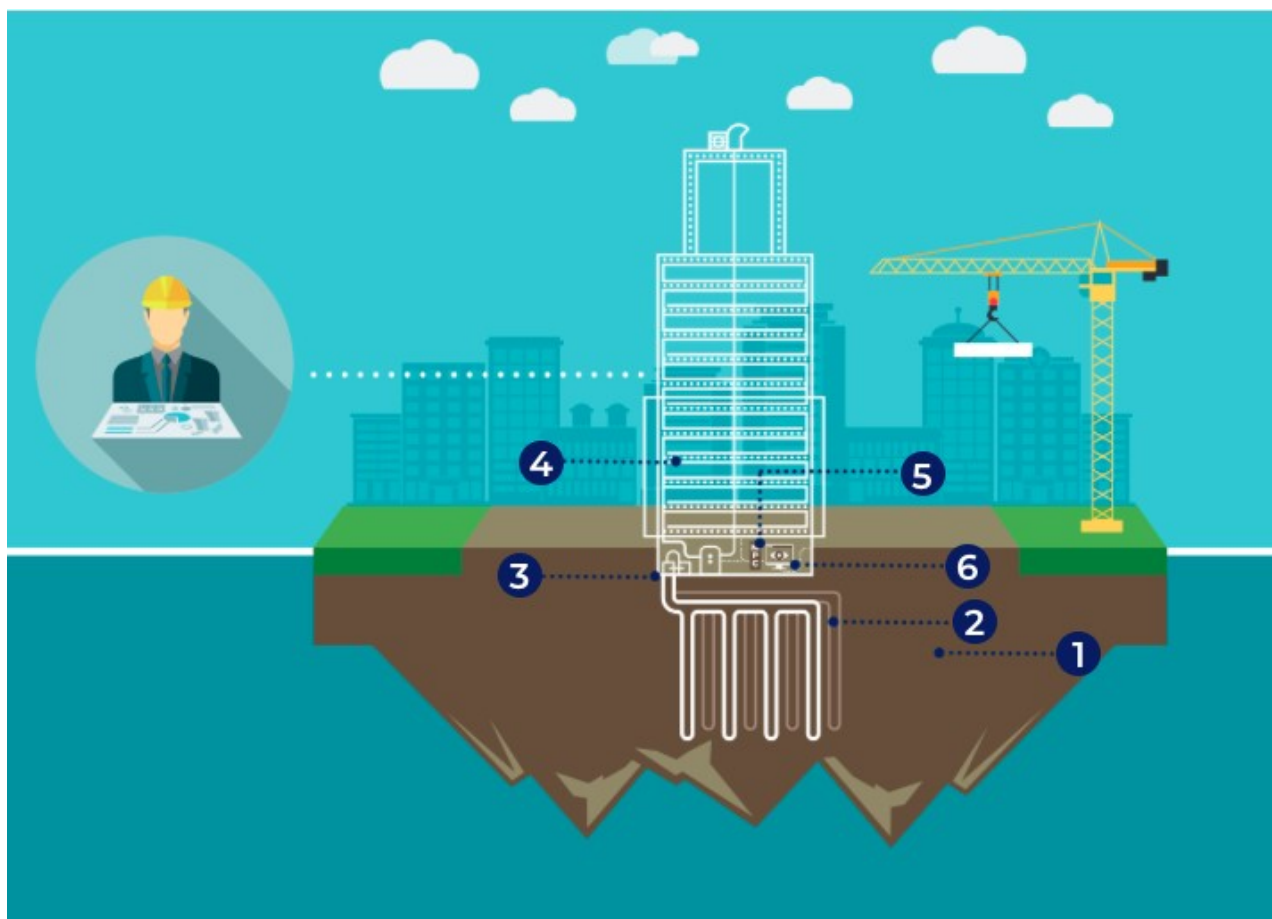
¹⁾ as set out in BMUB brochure 'What makes an Efficiency House Plus?'
²⁾ including cooling (if applicable)

³⁾ for new and retrofitted buildings acc. to section 16 subs. 1 clause 2 EnEV
⁴⁾ SFH: single-family homes, MFH: multi-family homes

Zdroj: Fraunhofer IBP



PROJEKT HYBRID GEOTABS





KNIHOVNA DOBŘÍŠ

- V Dobříši si vlastními silami udělali participativní návrh
- Velmi konkrétní a přesné zadání
- Dnes shoda v celém zastupitelstvu
- Stavět se bude asi v roce 2020
- Do podzimu 2018 DUR
- Systém Hybrid GEOTABS, spolupráce s Německem





POZVÁNKA

Seminář Efektivní domy plus v Německu

- **Pořádá DTSW e. V.**
- **26. dubna 2018 od 8:30, ČVUT, Jugoslávských partyzánů 3**
- **Hosté např.:**
 - Ingo Weiskopf, ředitel odboru územního plánování, Frankfurt n. M.
 - Petra Alten, spolkové ministerstvo vnitra a stavebnictví
 - Peter Friemert, ZEBAU GmbH



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DĚKUJI ZA POZORNOST

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