
Business opportunities arising from the Bulgarian energy efficiency policies

Information event of the Federal Ministry for Economic Affairs and Energy and the German Energy Solutions Initiative

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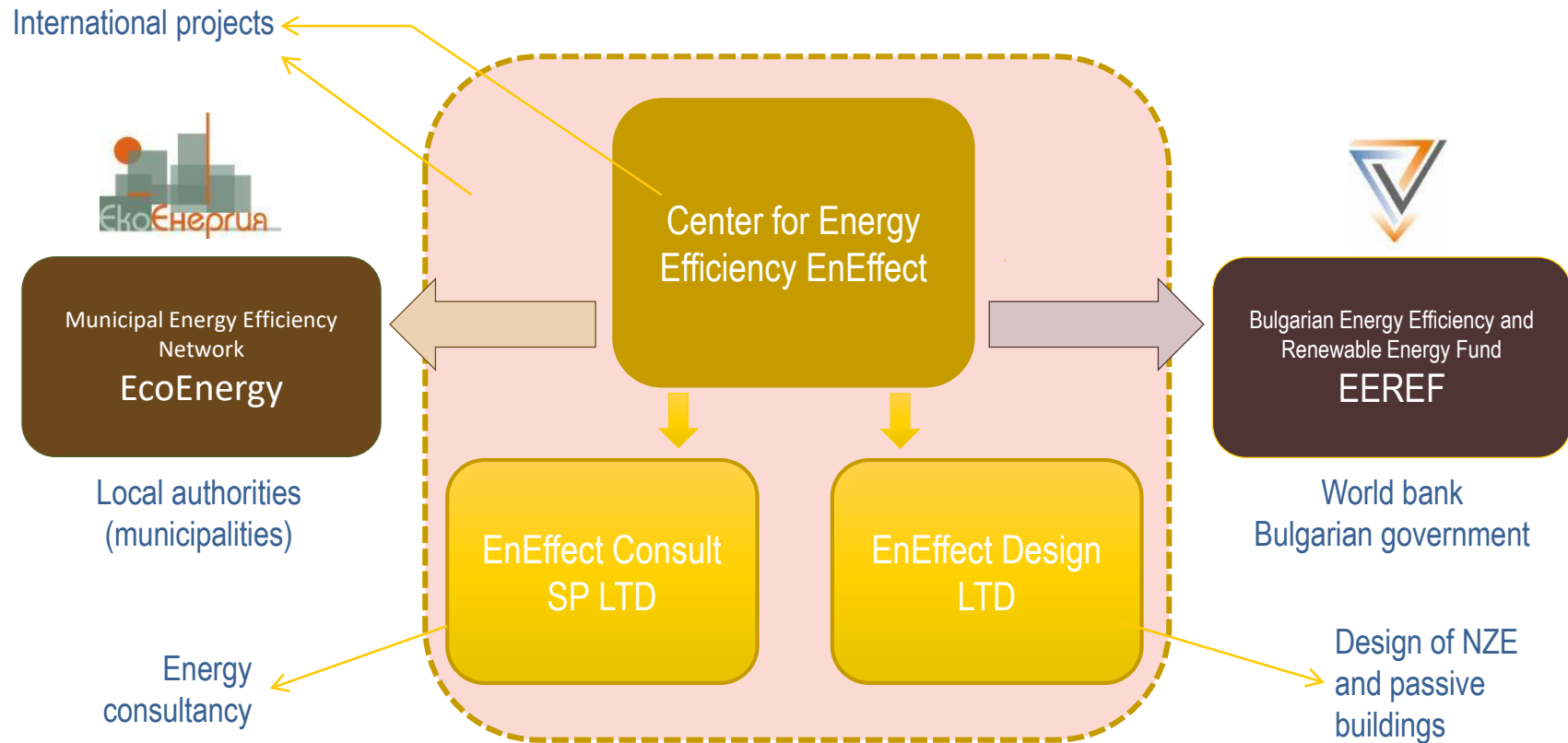
Mannheim, 06.11.2019



Deutsch-Bulgarische
Industrie- und Handelskammer
Германо-Българска
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EnEffect



The Passive House Standard

The Passive house is so well insulated that it can be heated only through the air coming from the ventilation system

Criteria For a residential building in Central European climate	Heating energy demand or heat load	max. 15 kWh/(m ² a) max. 10 W/m ²
	Cooling energy demand	max. 15 kWh/(m ² a)
	Primary energy demand	max. 120 kWh/(m ² a)
	Building airtightness	max. 0.6 /h (50 Pascal)
	Overheating frequency	max. 10 %

The calculation should be performed using the Passive House Planning Package (PHPP)

National NZEB Standard

Клас	EPmin, kWh/m2	EPmax, kWh/m2	ЖИЛИЩНИ СГРАДИ
A+	<	48	A+
A	48	95	A
B	96	190	B
C	191	240	C
D	241	290	D
E	291	363	E
F	364	435	F
G	>	435	G

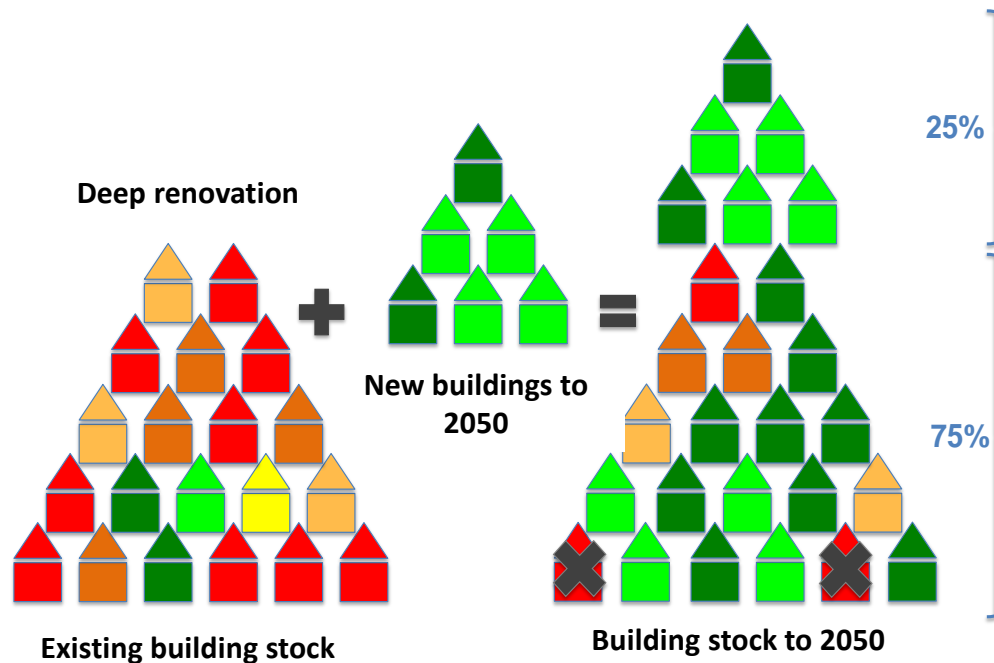
+ 55% RES = Nearly
zero-energy building

Energy Performance of Buildings Directive

Transition to design and construction of nearly zero-energy buildings (nZEB) after 2020 (after 2018 for public buildings)

Introduction of energy efficiency classes with a fixed value of the integrated energy consumption parameters - kWh/m2.a

The new EPBD



"Energy efficiency first" is a key element of the Energy Union

About 75% of buildings are energy inefficient

Only 0.4-1.2% of the stock is renovated each year

The main objective is to accelerate the cost-effective renovation of existing building, which is a 'win-win' option for the EU

Renovation work and energy retrofits add almost twice as much value as the construction of new buildings

The story of the renovation programmes



UNDP demonstration programme “Renovation of Multifamily Residential Buildings”: 2008

20% financing in the beginning

Gradually raised to 50%...

...and then to 80%

23 projects executed

The story of the renovation programmes



“Energy Renovation of the Bulgarian Homes”
Programme, financed through Structural
Funds

75% financing in the beginning

Raised to 100% in 2015

299 projects executed

The story of the renovation programmes



“National Programme for Energy Efficiency of the Multifamily Residential Buildings”

100% financing since the beginning

Renovation to energy class C

Total budget of 1 billion Euro

1784 projects executed

2022 contracts concluded

5000+ expressions of interest

Vision: continuity & engagement



- Long-term vision: defining of concrete energy savings goals and priorities
- Sustainable financial mechanism
- Technical assistance and specialized consulting at municipalities
- Professional capacity building
- Quality assurance and monitoring
- Engagement and responsibility of the beneficiaries / consumers
- Systematic communication campaign

National policies

National Energy Efficiency Action Plan 2014-2020 / National Energy and Climate Plan 2030/2050

National Plan for Nearly Zero-Energy Buildings 2015-2020

National long-term program to stimulate investment to implement measures to improve the energy performance of public and private residential and commercial buildings 2016-2020 (Renovation Programme)

National plan for improvement of the energy performance of heated and / or cooled buildings owned by the state or used by the state administration - 2015-2020 r.

National Programme for Energy Efficiency of the Multifamily Residential Buildings

National Housing Strategy

National Energy and Climate Plan



РЕПУБЛИКА БЪЛГАРИЯ
Министерство на енергетиката

**ПРОЕКТ НА ИНТЕГРИРАН ПЛАН В
ОБЛАСТТА НА ЕНЕРГЕТИКАТА И КЛИМАТА
НА РЕПУБЛИКА БЪЛГАРИЯ**

Energy efficiency given a definite priority

Energy saving goals and renewable energy goals
increased after feedback by EC

Measures for full liberalization of the energy
market provisioned

Energy efficiency obligations under Art. 7 / EED
continuing

Building sector holds a major role in energy
saving targets



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National NZEB Plan

НАЦИОНАЛЕН ПЛАН ЗА СГРАДИ С БЛИЗКО ДО НУЛЕВО ПОТРЕБЛЕНИЕ НА ЕНЕРГИЯ 2015-2020 г.

София, 2015 г.

Table 5.1					
Administrative buildings					
Year	GFA m ²	Investment, BGN	Savings (FEC and emissions)		
			ktoe	GWh	t CO ₂
2016	9 092	2 045 677	0.15	1.80	204.57
2017	27 821	6 259 773	0.43	5.04	625.98
2018	66 214	14 898 259	1.00	11.63	1 489.83
2019	192 968	43 417 784	3.29	38.208	4 341.78
2020	196 800	44 286 140	3.35	38.97	4 428.00
Total	492 896	110 907 634	10.56	122.76	14 445.63

Table 5.2					
Residential buildings					
Year	GFA m ²	Investment, BGN	Savings (FEC and emissions)		
			ktoe	GWh	t CO ₂
2016	0	0	0.00	0.00	0.00
2017	4 414	1 236 036	0.06	0.64	154.50
2018	11 312	3 090 091	0.14	1.65	395.92
2019	23 189	6 493 054	0.29	3.386	811.63
2020	35 654	6 655 380	0.45	5.21	1 247.88
Total	74 570	17 474 562	1.19	13.83	3 314.87

National Renovation Programme

НАЦИОНАЛНА ДЪЛГОСРОЧНА ПРОГРАМА

ЗА НАСЪРЧАВАНЕ НА ИНВЕСТИЦИИ ЗА
ИЗПЪЛНЕНИЕ НА МЕРКИ ЗА ПОДОБРЯВАНЕ
НА ЕНЕРГИЙНИТЕ ХАРАКТЕРИСТИКИ НА
СГРАДИТЕ ОТ ОБЩЕСТВЕНИЯ И ЧАСТНИЯ
НАЦИОНАЛЕН ЖИЛИЩЕН И ТЪРГОВСКИ

СГРАДЕН ФОНД

2016-2020 г.

София, юни 2017 г.

СЦЕНАРИЙ A2: Обновяване на 1% от необновената РЗП към 01.01.2016					
Година	РЗП, m ²	Инвестиции, лв	Жилищни сгради		
			Спестявания (КЕП и емисии)		
			ktoe	GWh	t CO ₂
2016	2 328 652	349 297 645	25.81	300.15	34 929.78
2017	2 328 652	349 297 645	25.81	300.15	34 929.78
2018	2 328 652	349 297 645	25.81	300.15	34 929.78
2019	2 328 652	349 297 645	25.81	300.15	34 929.78
2020	2 328 652	349 297 645	25.81	300.15	34 929.78
Кумулативно	11 643 262	1 746 489 225	283.94	3301.65	384 227.63

“By 2020, the Programme will gradually be transformed with the goal to decrease the grant component – 75%, 50%, 25% respectively. As a part of the realization of such approach, a social mechanism for vulnerable owners of the buildings has to be included, providing the option for 100% or 90% grant component if certain social criteria are met.”

National Renovation Programme

4.2 Financial incentives for investors in buildings with nearly zero energy consumption

Grant funding (10-20% of the value) of technologies with a proven energy-saving effect that enable achievement of nearly zero energy consumption (Class A and at least 55% renewable energy use).

Developing of a financial facility "Favourable Loans for High Energy Efficient Buildings (Single Houses or Flats)" (...) The interest rate on the credit is tied to the energy efficiency level of the building, ie. the better the energy performance of a building, the more favorable credit conditions;

Expansion of the Energy Efficiency and Renewable Energy Fund's portfolio with new packages to finance energy saving projects in buildings;

Establishment of municipal funds for energy efficiency

Some highlights

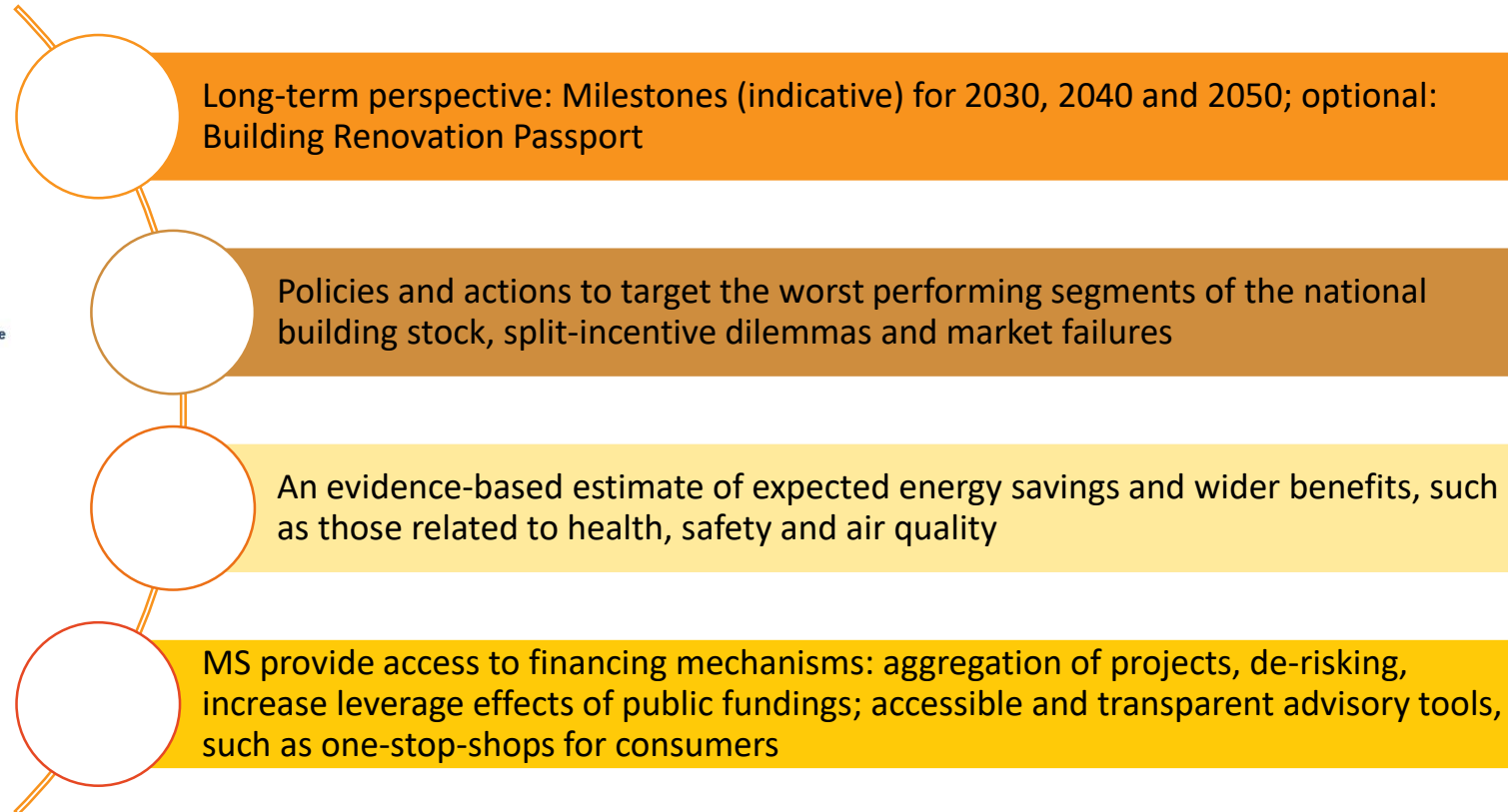


Long-term Strategies for
Deep Energy Retrofitting

Supported by:



based on a decision of the German Bundestag



Renovation of public buildings



Long-term Strategies for
Deep Energy Retrofitting

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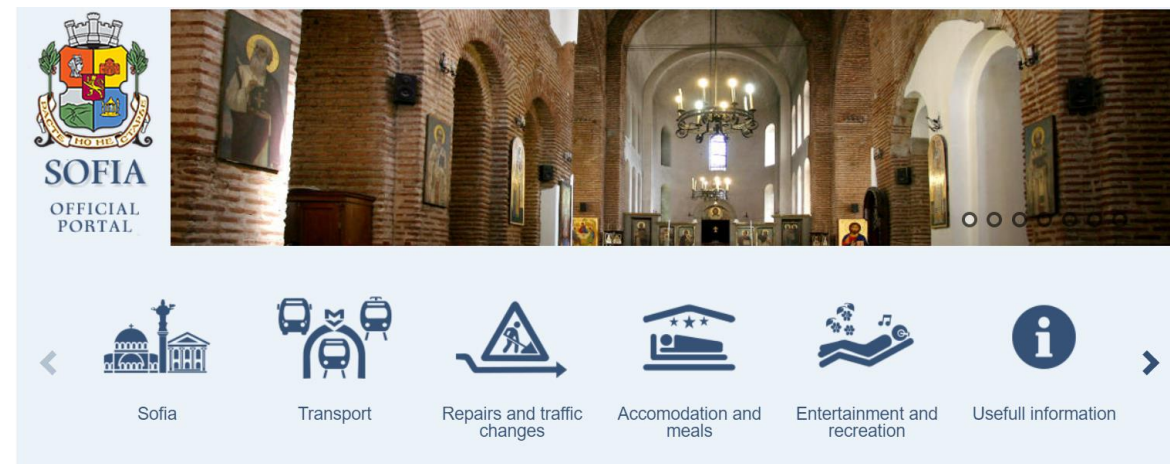
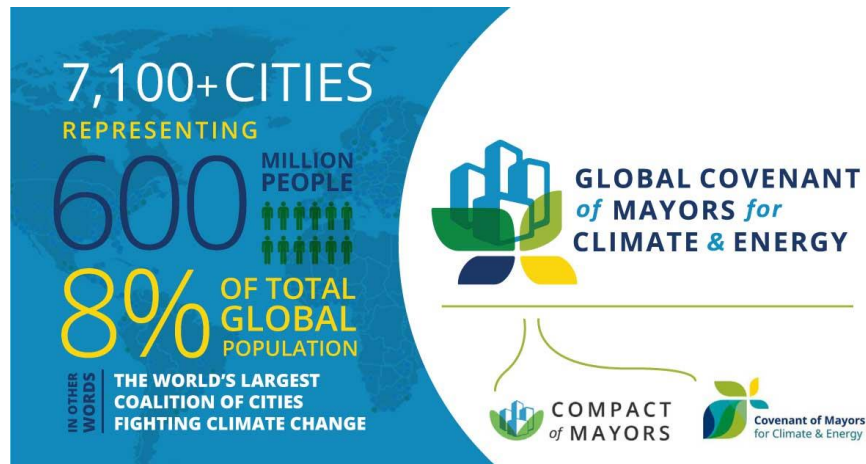


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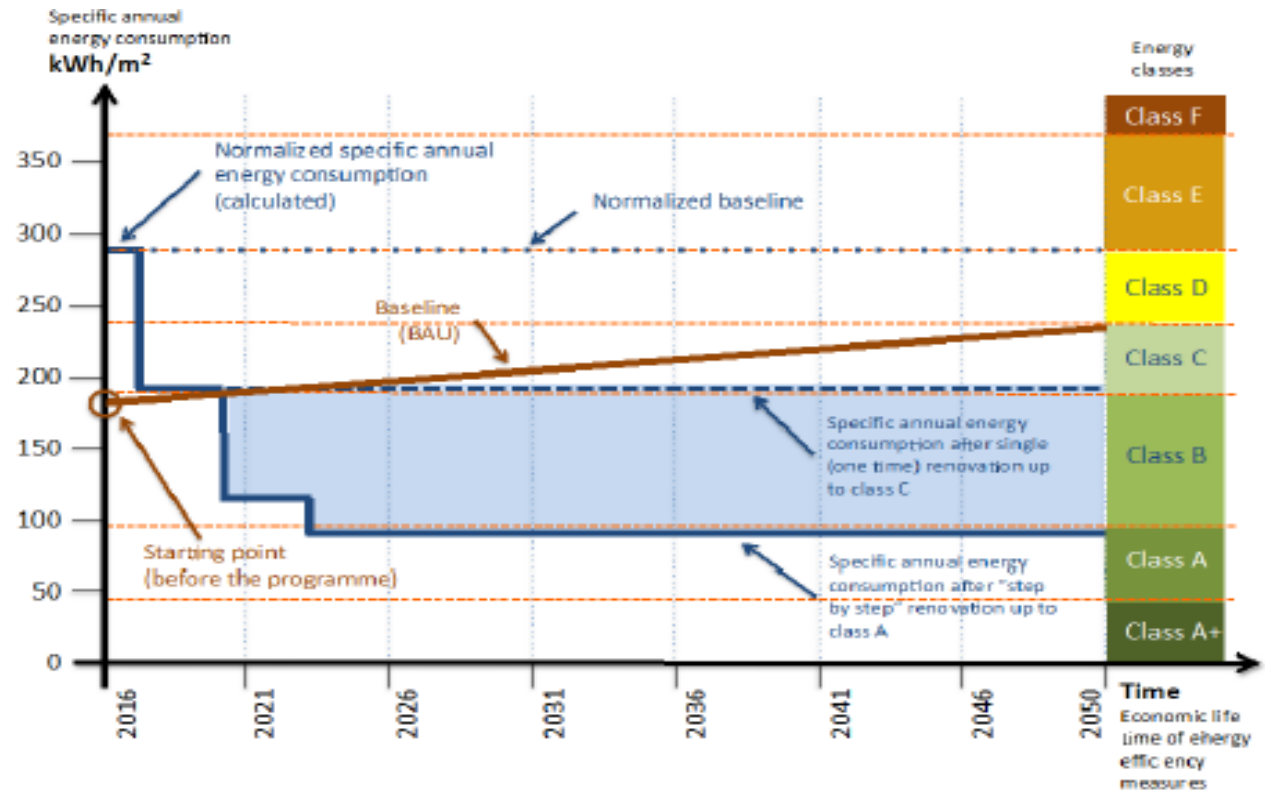
Renovation of public buildings

Sustainable Energy and Climate Action Plan of Sofia



Problem or opportunity: actual savings

Клас	EPmin, kWh/m ²	EPmax, kWh/m ²	Residential buildings
A+	<	48	
A	48	95	
B	96	190	
C	191	240	
D	241	290	
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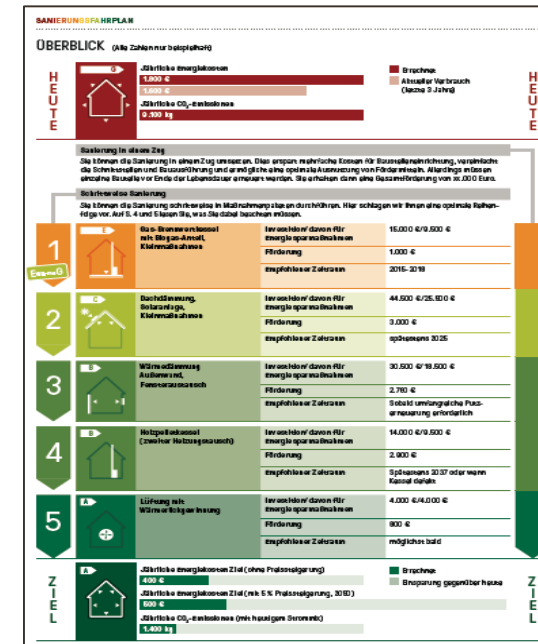
DEEP AND QUALITATIVE RENOVATION

HOLISTIC RENOVATION PROCESS

BUILDING RENOVATION ROADMAP



Source: Energiesprong

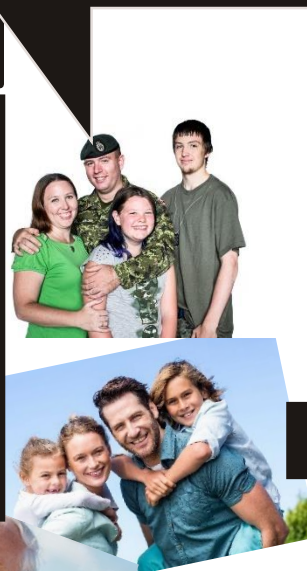


Source: ifeu

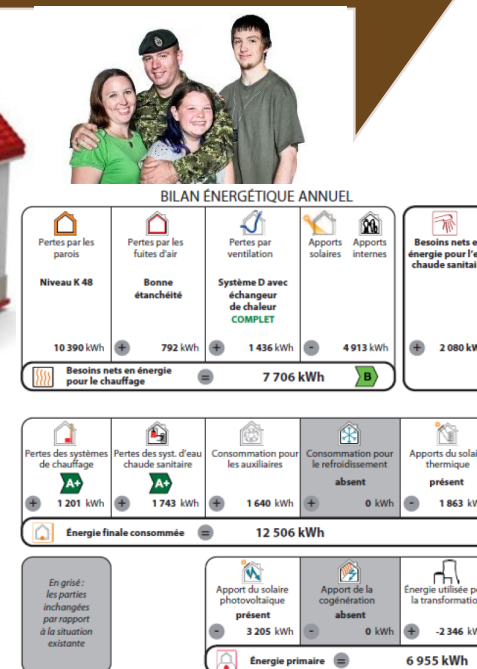


Informs potential buyers/tenants on the buildings' energy performance

Guides (new) owners with
a personalised step-by-step
renovation roadmap



Source: iBROAD



The EEA Financial Mechanism

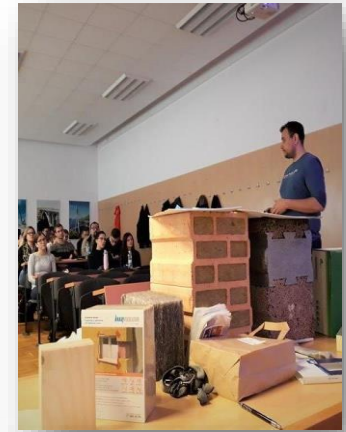
Programme „Renewable Energy, Energy Efficiency, Energy Security Program“

- Efficient use of hydropower potential
- Geothermal energy use (heating / cooling)
- Rehabilitation and modernization of municipal infrastructure (public lighting)
- Improving energy efficiency of buildings (the NZEB programme)
- Energy efficiency and utilization of geothermal energy in industry
- Capacity building programmes on geothermal energy
- Capacity building programmes on renewable energy, energy efficiency and energy management
- Support for monitoring the energy consumption of municipalities

Building Knowledge Hubs



Building Knowledge Hubs



Communication



It's never, never enough...

● Web:

www.train-to-nzeb.com

www.fit-to-nzeb.com

www.craftedu.eu

● Facebook:

www.facebook.com/fit2nzeb/

www.facebook.com/train2nzeb/

● Twitter:

[@FIT2NZEB](https://twitter.com/FIT2NZEB) [@Train2nZEB](https://twitter.com/Train2nZEB) [@CraftEdu1](https://twitter.com/CraftEdu1)

Work with experts and citizens



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Federal Ministry
for Economic Affairs
and Energy



MITTELSTAND
GLOBAL
ENERGY SOLUTIONS
MADE IN GERMANY

Thank you for your attention!

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Facilitator