



ENERGY RENOVATION OF HOUSING TOWARDS SUSTAINABLE LIVING ENVIRONMENT

The Perspective of Homeowners' Associations in Bulgaria



PRESENTATION CONTENT

- Union of Homeowners' Associations
- Bulgarian housing sector brief
- Priorities for sustainable housing
- Energy renovation of existing housing as sustainability priority – process and approaches, best practices and achievements
- National and European context of the energy renovation
- Role of homeowners' associations – barriers and opportunities



UNION OF HOMEOWNERS' ASSOCIATIONS

- National umbrella organisation established in 2006 to combine the efforts of homeowners in condominium apartment buildings to achieve high quality of living environment
- Aims to achieve its objectives through a permanent system of training, consultancy and research for homeowners and homeowners' associations in regard to the quality of the living environment, the sustainability of the built environment and the community involvement in the process of urban planning and urban design in cities
- Member of the National Coalition "Decent Home"
- Member of the working group "Housing Policy" at the MRDPW

BULGARIAN HOUSING SECTOR BRIEF

- Total amount of 3.9 million dwellings in 2.1 million residential buildings
- 97.5% homeownership
- 73.2% of the housing stock built in the period 1946-1990
- 18.1% of the housing stock in 21,718 prefabricated multi-story apartment buildings mainly located in the big Bulgarian cities
- 550 (505 in cities) housing units per 1,000 people
- 31.4% uninhabited dwellings
- 150-300 kWh/m² average energy consumption of housing



PRIORITIES FOR SUSTAINABLE HOUSING

- To energy renovate the existing housing stock and thus, to increase the quality of living conditions
- To increase the usability and to improve the distribution of the available housing stock
- To provide social housing for the marginal social groups
- To increase the housing affordability

ENERGY RENOVATION AND MAINTENANCE OF MULTI-FAMILY RESIDENTIAL BUILDINGS (2004)

- Bottom-up approach with the active residents' involvement
- Soft loan financing and activating the land value by upgrading the renovated multi-family residential buildings with the future value of the property serving as a guarantee to the financing institution
- Soft loan repayment from the achieved energy savings of 50%



СЕРТИФИКАТ
за енергийните характеристики на сградата

№: 063EEX001 Категория: A Емкостност: 2016 г.

Сграда	Минициент Бела №10
Адрес	Средец ул. Златковци №10
Тип на сградата	Средец
Година на изграждане	1985 г.
Възраст	20.5
Обем	1214 m ³
Обем	9182 m ³

Годишен разход на енергия

ДЕЙСТВИТЕЛЕН	ЕТАЛОНЕН
138.9 kWh/m ² ·a	148.1 kWh/m ² ·a

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DEMONSTRATION RENOVATION OF MULTI-FAMILY RESIDENTIAL BUILDINGS (2007-2011)



- Energy renovated multi-family residential buildings – 50
- Concerned households – 1,093
- Expected energy savings per year – 8 488,575 kWh (40-60%)
- Expected savings of CO₂ emissions per year – 6,672 tones
- Top-down approach with 50% subsidy from the state budget



ENERGY RENOVATION OF BULGARIAN HOMES (2012-2015)



- Energy renovated multi-family residential buildings – 158
- Initiative of the MRDPW with the financial support of the EU Operational Program “Regional Development” 2007-2013
- Achieved energy savings of 50%
- Top-down approach with 75% combined subsidy





NATIONAL ENERGY EFFICIENCY PROGRAM IN MULTI-FAMILY RESIDENTIAL BUILDINGS

- The national program started in 2015 with a Council of Ministers decree and 1 billion BGN financing from the state budget
- Decentralized management model with emphasis on the role of local authorities and homeowners' associations
- The program finances the most cost-effective energy-saving package for the building, which achieves the energy consumption class "C" in accordance with Ordinance No. 7 from 2004 on energy efficiency, heat conservation and energy savings in buildings
- 100% subsidy from the state budget

CURRENT STATUS

- By mid-July 2017 1,982 buildings are at a different stage of renovation, with 585 of them in the construction phase
- 515 multi-family buildings with an improved residential infrastructure and a total built-up area of 2 489,434 sq.m. are fully completed and put into operation
- To this date, 62,252 people have benefited from the improved infrastructure of the 29,915 renovated dwellings
- There are 2,022 signed contracts for target financing between the municipalities, the regional governors and the Bulgarian Development Bank



First phase of the National Program





First phase of the National Program



First phase of the National Program





First phase of the National Program



BEST PRACTICE OF “LADOVITSA-58” HOA

- Energy renovated 15-storey apartment building using BGN 1 211,301
- Thermal insulation of the building envelop; roof waterproofing; replacement of the window frames; repair of the lighting system in the common parts; implementation of a new lightning protection system; constructive fortification of the terraces on the attic floor
- A new horizontal heating system, automatically balanced and energy-optimized, with an individual measurement of the monthly heat consumption for each apartment at the expense of the homeowners (self-participation of approximately BGN 45,000)
- Energy renovated apartment building at class “B” with expected energy consumption decrease of 745,000 kWh/year over 7,700 sq.m. of residential infrastructure and expected CO₂ savings of 233 t/year

SUMMARY OF RESULTS ACHIEVED SO FAR

Region	Annual energy consumption (kWh/y) after renovation	Total energy savings kWh per year	Total savings of tCO2 per year	Savings in BGN per year	Average investment payback period (years)	Average share of savings [%]
Blagoevgrad Region	28 572 927,00	34 571 292,11	14 297,72	8 065 207,98	7,44	53,44
Burgas Region	20 309 882,00	19 852 412,92	8 588,04	2 801 112,80	10,39	48,00
Varna Region	1 303 440,00	1 499 104,00	456,30	270 302,00	7,57	51,31
Veliko Tarnovo Region	3 016 690,00	3 862 708,91	1 642,61	491 357,34	9,51	55,80
Vidin Region	4 601 003,00	7 456 350,00	1 323,50	790 180,00	8,02	60,56
Vratsa Region	1 720 943,00	2 201 015,49	845,32	270 446,73	9,16	53,54
Gabrovo Region	5 561 595,00	7 117 517,48	1 501,45	891 280,88	9,47	53,35
Dobrich Region	2 243 989,00	3 229 015,00	372,02	268 171,59	9,82	60,13
Kardjali Region	2 955 480,00	5 411 037,00	529,11	379 051,40	11,24	62,07
Kyustendil Region	9 763 685,00	11 271 321,46	3 682,27	1 420 474,50	6,83	53,38
Lovetch Region	1 888 990,00	2 815 163,00	523,97	292 016,56	7,80	58,84
Montana Region	3 807 605,00	4 127 746,43	833,07	434 681,02	7,83	53,26
Pazardjik Region	12 854 155,00	14 083 320,40	4 573,26	1 673 645,50	10,49	51,81
Pernik Region	2 540 960,00	3 109 382,00	688,76	393 345,00	10,85	57,49
Pleven Region	3 007 339,00	3 790 958,24	882,07	410 846,70	10,56	58,38
Plovdiv Region	6 902 546,00	7 146 464,34	1 525,12	701 579,57	18,20	47,98
Razgrad Region	1 584 770,00	2 024 765,00	415,60	273 308,32	6,83	57,23
Russe Region	1 171 160,00	1 116 859,60	540,78	126 408,40	6,06	45,62
Sliven Region	4 436 344,00	6 218 261,00	1 761,70	813 842,40	9,31	57,30
Smolyan Region	11 005 231,00	21 625 124,20	2 765,27	1 647 227,20	9,07	63,82
Sofia City Region	414 400,00	338 817,00	89,04	34 545,00	8,25	44,98
Sofia Region	20 765 695,00	9 609 949,26	1 378,43	742 870,74	9,10	62,66
Stara Zagora Region	10 740 394,00	10 764 376,00	4 685,87	1 991 939,34	9,94	45,42
Haskovo Region	19 223 396,00	22 876 381,01	7 396,90	2 457 051,43	10,97	53,90
Shumen Region	5 074 670,00	6 808 926,69	1 473,00	1 208 229,42	7,58	53,82
Yambol Region	4 160 208,00	4 162 433,00	2 019,28	648 454,80	8,81	51,66
Общо	189 627 497,00	217 090 701,54	64 790,46	29 497 576,62	9,49	53,77



REGIONS FOR GROWTH 2014-2020

- Priority Axis 1 “Sustainable and Integrated Urban Development”
- Establishment of a specialized fund with funds from the national budget and the Operational Program “Regions for Growth” 2014-2020
- Planned to continue the approved projects from the previous programming period and to be implemented in parallel with the national program
- Emphasis on the energy renovation of the large panel apartment buildings with 100% grant



BARRIERS & OPPORTUNITIES FOR HOMEOWNERS' ASSOCIATIONS

- Insufficient capacity, motivation and responsibility of homeowners' associations for a sustainable management of energy renovated residential buildings
- Limited involvement of homeowners' associations in the decision-making and control over the implementation of the energy renovation of their homes
- Energy efficiency class “C” of the energy renovation targets despite the technical and organizational capacity for higher energy consumption class
- Still immature stakeholders' coordination



Thank you for your attention!

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