



АГЕНЦИЯ ПО ЕНЕРГИЙНА ЕФЕКТИВНОСТ

ENERGY EFFICIENCY AGENCY BULGARIA

ACTUAL STATE OF THE ENERGY EFFICIENCY POLICY IN BULGARIA

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Bulgaria

Territory **111 thousand km²**
Population: **7.6 millions**

Primary energy intensity : **75 % > average EU level**

Bulgaria (2008) : **0.28 koe/€2005 ppp**
EU : **0.16 koe/€2005 ppp**

Final energy intensity : **40 % > average EU level**

Bulgaria (2008) **0.14 koe/€2005 ppp;**
EU **0.10 koe/€2005 ppp**

Final to Primary Energy Consumption : 47 %





Bulgarian Energy Efficiency Agency at a glance

- Created as National institution in 1997
- Since 2002 – Executed agency under Minister of energy and energy resources
- 70 employees
- 2 Million € annual turnover
- Basic function - Implementation of state policy in energy efficiency, functions from basic decision-making to the implementation
- Organizational structure:
 - ✓ Directorate for plans, programs and international cooperation
 - ✓ Directorate for control and information
 - ✓ 13 regional units
- **Now - The Energy Efficiency Agency is a legal body and has a status of an executive agency under the Minister of Economy, Energy and Tourism.**



Energy Efficiency: Main Provisions in Legislation

- Energy Efficiency Strategy;
- National EE Action Plan;
- Establishment of national and individual energy saving targets: energy dealers, buildings, enterprises;
- Inspections of hot water boilers and air conditioning systems;
- ESCO;
- Long-term agreements;
- Energy Efficiency Fund;
- Energy managers;
- Certificates for proving energy savings;
- Regional Energy Efficiency Centres;
- National energy efficiency information system.

National Energy Efficiency Action Plan

Accepted indicative target for the whole period of the Directive 2006/32/EC (till 2016)

$$9 \% = 627 \text{ ktoe} = 7\,291 \text{ GWh}$$

Indicative target for the period of the First Action plan until 2010

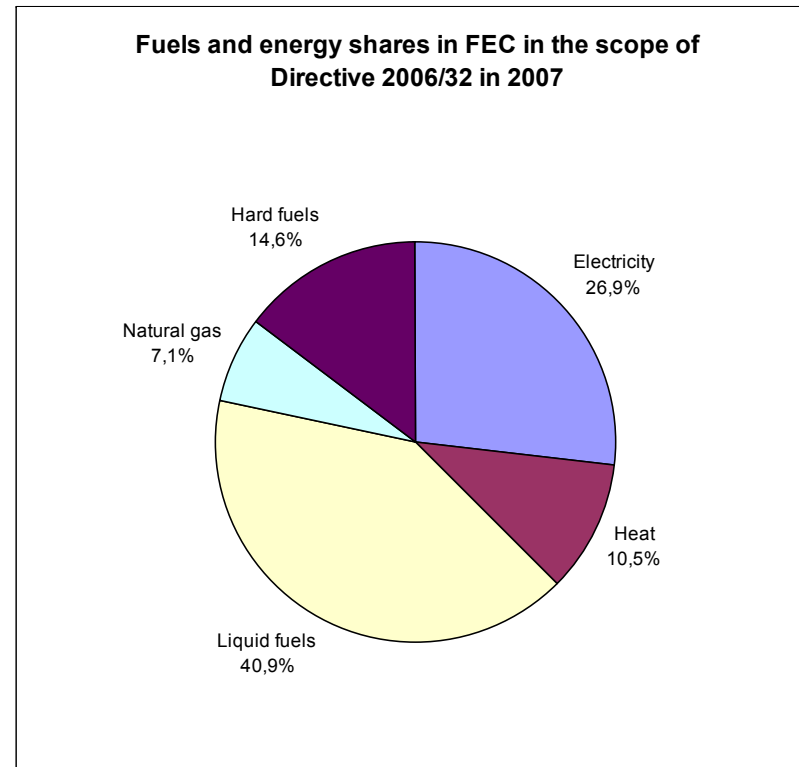
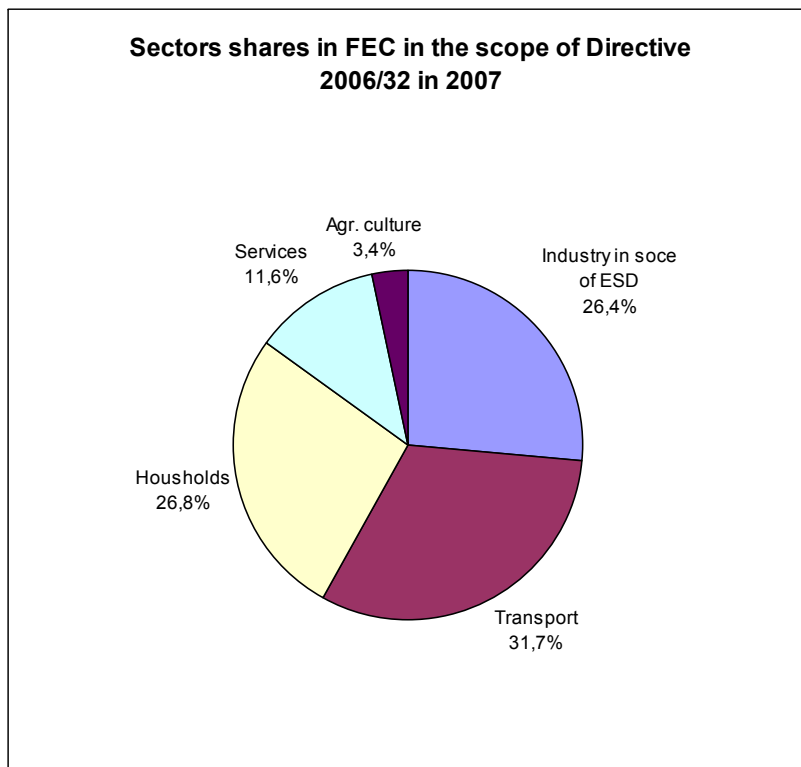
$$3 \% = 209 \text{ ktoe} = 2\,430 \text{ GWh}$$

General target of the EU indicated by the European Council in March 2007

$$20 \% \text{ saving of energy until 2020}$$

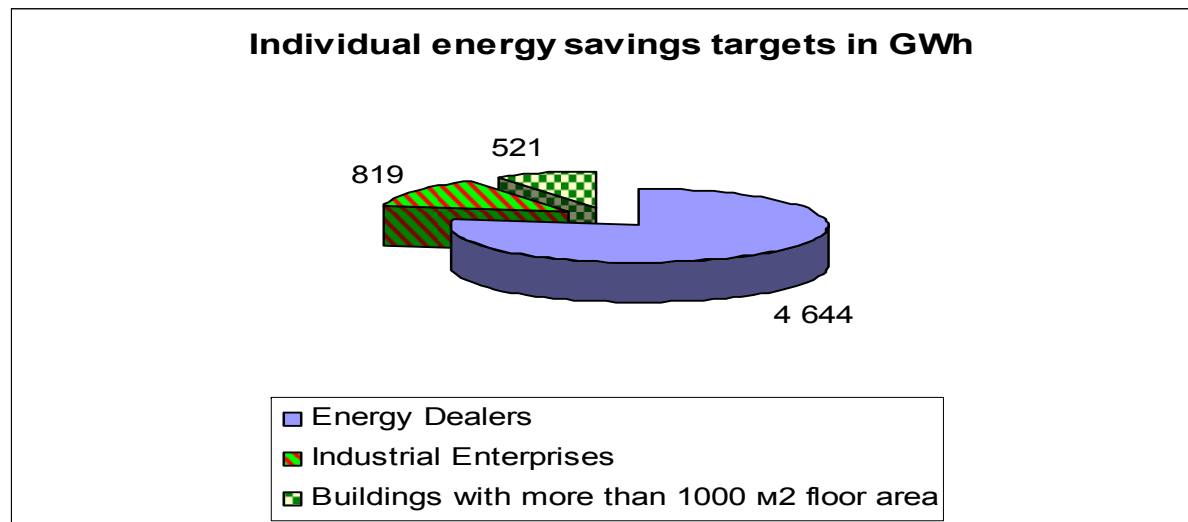


Shares of fuels and sectors to the consumption in the scope of the EE Law



National indicative energy savings targets : more details

1. National target to 2016 is defined as a share of the final energy consumption
2. National target is indicated in the National Action Plan and it is allocated as individual targets between the persons obligated, who are split in three separated groups as follows:
 - Energy Dealers;
 - Owners of buildings with more than 1 000 m² floor area;
 - Owners of enterprises with annual consumption more than 3000 MWh
3. A list of obligated persons and their individual targets is being published in the National Action Plan and has to be actualized every three years (www.seea.government.bg).



List of energy efficiency measures common for all sectors in FNEEAP

- Standards and rules for energy efficiency of products and services, including buildings.
- Audits and EE Measures implementation .
- Energy labels and passports.
- Modern systems for energy measuring and reporting .
- Training in energy saving and energy effective technologies.
- Legislative, financial, tax and organizational measures for reducing the end-use energy consumption.
- Information campaigns.





Report on FNEEAP implementation – 30.04.2010

Review on EE status in the year 2008

- ✓ Types of Measures and activities of the National Action Plan implemented in 2009 per types of fuels and energy
- ✓ Assessment of energy savings implemented and expected
 - *Top- down method*
 - *Bottom- up method*

Assessment of energy savings reached under TOP-DOWN method per sectors

Sector	2008
Industry	135,9 ktoe
Transport	162,6 ktoe
Households	4,3 ktoe
Services	51,3 ktoe
Total energy saved	354,1 ktoe



Total “Bottom-up” assessment of the FNEEAP implementation

Energy savings achieved – **1 329** GWh/год.= **114** ktoe/year

Energy savings expected – **1 680** GWh/год.= **145** ktoe/year

The report on the FNEEAP implementation indicates that the country is on the right road for the performance of the national indicative target for energy savings. This will have a favorable impact on all economic sectors and will increase its compatibility as well as the future sustainable development!



Energy savings potential of the public buildings with floor area over 1000 sq.m.

		Audited Buildings 2007-2008	Total registered buildings
Buildings	Number	928	6 450
Total useful area	million m ²	3,75	18,3
Energy consumption (annually)	ktoe/annually	41,6 (481 GWh)	202 (2 347 GWh)
Specific energy consumption	kWh/m ² /annually	128	
Necessary investment	Million Euro	124	740
Expected energy savings (annually)	ktoe (GWh)	28 (326 GWh)	137 (1 590)
Specific investment per 1 m ²	Euro/m ²	33	40
Specific investment per 1 kWh saved	Euro/saved kWh	0,38	0,46
Expected saved electricity generation power	MW	20	70

Energy savings potential of the enterprises with annual energy consumption over 3 000 MWh

		EEL SCOPE		Total Industry
		Audited (10. 2010)	Obligated	
Enterprises	Number	132	279	-
Energy Consumption	ktoe/annually	267	926	3 357
Annual energy savings (expected)	ktoe/annually	38	132	478
	GWh/annually	440	1 530	5 542
Necessary investments	Million Euro	101	352	1 275
Specific investments	Euro/kWh savings	0,23		
Saved generated power (expected)	MW	-	86	310



Possible financial sources for buildings insulation

- Owner resources
- State budget: now only for ESCOs
- Energy Efficiency Fund: not for individual household measures
- Obligated persons: owners of buildings over 1000 sq.m.; owners of enterprises with annual consumption over 3000 MWh; large energy dealers and distributors (over 75 GWh annually)
- European operational program for Bulgaria: only for state and municipal buildings
- Fund “Kozloduy”: now in procedure of choosing a consultant company
- Credit lines (EBRD grant) : 20%-30% grant for individual and collective credits



Project “Policy reforms for EE investments”

RECOMMENDATION 1 – Monitoring of Policy Implementation

The overall monitoring of the implementation of energy efficiency policy is assigned, by the Ministry of Economy, Energy and Tourism, to the Energy Efficiency Agency and the activities of the Agency include:

- Drafting of national action plans of energy efficiency ;
- Organize the implementation of activities and measures, included in the national action plans of energy efficiency;
- Submit annually to the Minister of Economy and Energy a report on the implementation of the national action plans of energy efficiency;
- Confirm the size of the energy savings as a result of the provided energy services by issuing certificates for energy savings;
- Organize the introduction and maintenance of a national information system for the status of energy efficiency.



Project “Policy reforms for EE investments”

RECOMMENDATION 3 - Transparent Public Procurement Guidelines

- Paragraph 6 of the additional provisions of the Energy Efficiency Law stipulate adoption of rules and criteria related to minimization of the energy consumption for priority categories of equipment and transport means subject to supply through public procurement. The Working group on the drafting these rules and criteria include experts from Energy Efficiency Agency, Public Procurement Agency, Ministry of Economy, Energy and Tourism, Ministry of Environment and Water, Ministry of Transport, Information Technology and Communications and Bulgarian Institute for Standardization. The rules have been drafted but not yet adopted.
- The work on National action plan for green procurements started. At this point is formed working group to develop the National action plan. It include experts from the following institutions: Ministry of Economy, Energy and Tourism, Ministry of Environment and Water, Ministry of Transport, Information Technology and Communications, Public Procurement Agency, Energy Efficiency Agency and Executive Environment Agency.



Project “Policy reforms for EE investments”

RECOMMENDATION 2 & 4 & 5 - Least-cost investment plan for district heating & National Education, Training and Public Awareness Programme, Capacity Building for Policy Makers

Draft of the plan for least-cost investment in district heating is process of consideration in the Ministry of Economy, Energy and Tourism .

Capacity building for policy makers

- Energy efficiency policy in Bulgaria is implemented by the central government and municipal bodies through elaboration of energy efficiency plans and programmes for their implementation. Reports on the implementation of the mentioned plans and programmes shall be submitted annually to the Executive Director of the Energy Efficiency Agency. These reports shall contain description of the activities and measures for improvement of energy efficiency and the achieved energy savings. The Energy Efficiency Agency issued guidelines and organized workshops for the staff of ministries and municipalities engaged with preparation of the reports.
- The Centre for Energy Efficiency (EnEffect) conducted series of training courses on municipal energy planning. The primary objective of the courses was introduction to the fundamentals of municipal energy planning in order to build the capacity of local experts for the implementation of an effective energy policy at the local level, as well to identify energy efficiency projects for financing under Operational Programme “Regional Development” and European programmes and funds.



Project “Policy reforms for EE investments”

RECOMMENDATION 6 – Capacity building for local financial institutions

The BEERECL has been established to support industrial energy efficiency and small renewable projects in the private sector by the EBRD in cooperation with Bulgarian Government. The number of participating local banks increased to 6. A key part of the BEERECL is the free consultancy services provided by DAI Europe and EnCon Services to help eligible projects. This service is free of charge and include:

- An introduction to the BEERECL facility, including the potential benefits for business and the facility procedures;
- Determine project eligibility and help restructure the project, if required, to meet eligibility requirements;
- Check the creditworthiness of your project at the participating bank;
- Perform an energy audit and cash flow analysis;
- Assistance in developing the business plan for your project and help with the submission to one of our partner banks;
- Monitoring of project implementation;
- Help with the Completion Validation Review request.
- BSA Programme Bulgaria - EBRD – financing business consulting services for SMEs – 18.10.2010, 3 days seminar “Energy Audit : capacity building for energy audit Companies ”



Conclusions and recommendations

1. The energy intensity of the economy is reducing with more than 5 % average per year in the period 1997-2008, mainly due to the improved energy efficiency in the industry.
2. The report on the FNEEAP indicates that our country is on the right road to fulfill the national indicative target for energy savings.
3. It is necessary to improve the current system for monitoring and control on the performance of the national indicative target for energy savings.
4. Additional efforts and additional investments are necessary to reach even more ambitious target of the triple 20-20-20, required by the European Union..
5. Renovation of the existing building stock needs significant investments. The owners of buildings have not enough financial recourses to implement all necessary measures for full renovation of the buildings. It is not possible to accelerate the renovation of existing buildings without additional financing.
6. The EE-market of building renovation & SMEs in Bulgaria is not well developed and it offers a space for new players during the next 10-15 years.
7. New schemes for soft financing facilitating the implementation of projects and activities for reduced consumption should be elaborated.



**ENERGY EFFICIENCY AGENCY
BULGARIA**

Thank you for the attention!

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www.SEEA.government.bg