ACTUAL STATE OF THE ENERGY EFFICIENCY, MONITORING AND VERIFICATION IN BULGARIA

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Bulgaria
Territory 110 910 km²
Population: 7.6 millions

Primary energy intensity:
~ 75% > average EU level

Bulgaria (2008) - 0.28 кое/€2005p
EU - 0.16 кое/€2005p

Final energy intensity:
~ 40% > average EU level

Bulgaria (2008) - 0.14 кое/€2000;
EU - 0.10 кое/€2000

Ratio:
Final to Primary Energy Consumption: 0.47
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
- Organizational structure:
  - Directorate for programs, projects 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** (to be adopted by National assembly) and **Action plans** (adopted by the Government);
- Establishment of **national** and **individual** energy saving **targets** for energy dealers and large energy consumers;
- **Buildings**: Owner’s (over 1000 sq.m useful floor area) **obligation for certification**;
- **Enterprises**: Large energy consumer (over 3000 MWh/year) **obligation for audits** and implementation of the prescribed EEI measures;
- **ESCO financing**: ordinance for state and municipal buildings;
- **Energy Efficiency Fund** (energy traders contribution) (EUR 30 Mln);
- **Inspections** of hot water **boilers** and **air-conditioners**;
- **Energy managers** in large energy consumers and large building;
- **Long-term agreements** (EE Law);
- **Certificates** for proving energy savings (future introducing of white certificates scheme);
- **Regional Energy Efficiency Centers Establishment**;
- **National energy efficiency information system**.
Energy Efficiency: Main Foreseeing Activities and Measures

Short list:

- Extending of energy services, including energy efficiency measures;
  - Additional liberalization of energy market, especially in area of energy services supplying.
  - Developing of a special market for energy services: tradable white certificates.

- Facilitate investment in public sector;
  (norms, audits, certification, ESCO-contracting)

- Binding of energy audits with implementation of the recommended energy efficiency measures;
  (Requirement for access to the resources of more favourable financing.)

- Support for introducing energy managers in large energy consumers;
  (Training)

- Development of information system for energy efficiency
  (According to Directive 2006/32/EC)
National indicative energy savings targets

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 obligated persons, which are separated in three groups as follows:
   - Energy Dealers;
   - Owners of buildings with more than 1,000 m² useful floor area;
   - Owners of enterprises with annual consumption more than 3,000 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](http://www.seea.government.bg)).

<table>
<thead>
<tr>
<th>Obligated Persons</th>
<th>Individual Energy Savings Targets in GWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Dealers</td>
<td>4,644</td>
</tr>
<tr>
<td>Industrial Enterprises</td>
<td>819</td>
</tr>
<tr>
<td>Buildings with more than 1000 m² floor area</td>
<td>521</td>
</tr>
</tbody>
</table>
1. Control on the **owners of objects** with high energy consumption
   ✓ Control on the owners of **buildings and industrial enterprises** for the establishment of the individual targets for energy savings and energy savings measures implementation
   ✓ Control on the **energy efficiency management**. The management should be implemented by the obligated persons
   ✓ Control on efficiency of the boilers and air-conditioning systems exploitation

2. Control on the **quality of the audits**, done by registered companies for buildings and enterprises auditing

3. Control on the **energy dealers** for individual energy savings targets implementation and their obligations connected with the provided energy services
1. Subjects of the control – owners of:

- Municipal and State buildings with more than 1 000 m² floor area: 300 obligated persons
- Private buildings with more than 1 000 m² floor area: >1 000 obligated persons
- Enterprises with annual energy consumption more than 3 GWh: >230 obligated persons
- Boilers with power more than 20 kW: >1 720 obligated persons
- Air-conditioning systems with power more than 12 kW: >180 obligated persons

2. Subjects of the control – energy dealers:

- >50 obligated persons

3. Juridical persons or companies for energy efficiency auditing, registered in EEA:

- Buildings auditing: >190 obligated persons
- Enterprises auditing: >45 obligated persons

**TOTAL:** >3 715 obligated persons
Control on the quality and the amount of the implemented measures

Last but **substantial control on**

- The **improved characteristics of the object.**

- The **individual energy savings targets** implementation.  
  *(The implementation of the individual energy savings targets has to be proved by *Energy savings certificate*. The standard methods, developed by the auditors and approved by EEA, are being used.)*

- This control is assisted by the **energy auditing companies.**
Obstacles and possibilities for control quality improvement

- **Normative**: frequent changes, complicated putting in practice, lack of clearness and needs of interpretation, distinction of the responsibility.

- **The qualification of the personnel**: higher requirements for appointment, increasing of number of control audits and control verifications, lower dependence on external education.

- Permanent access to the software applied at the audits or development of own software.

- Widely use the Informational system possibilities and the territorial teams.
Example for control on the enterprises audits: extent of the measure implementation and actually achieved effect, settled after control audits

<table>
<thead>
<tr>
<th>Total audited annual energy consumption</th>
<th>Expected effect in the reports</th>
<th>Extent of the measure implementation</th>
<th>Actual energy consumption decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>211 ktoe/year</td>
<td>33 ktoe/year</td>
<td>16%</td>
<td>5 ktoe/year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 %</td>
<td>1.5 %</td>
</tr>
</tbody>
</table>
Bulgarian legislation concerning monitoring and control of requirements for electrical appliances

- Ordinance on labeling of household appliances on the energy consumption and other resources - in force from 11.08. 2006


- Requirements on the energy efficiency of the office equipment to the Public Procurement Law
Control bodies

- Commission for Consumer Protection

- Bulgarian National Audit Office

- “Internal Audit” Directorate in Ministry of Economy, Energy and Tourism
Types of CONTROL

1. Prevention control

- Introduction on the consumer and economic operators with the requirements in the Ordinance for labeling, advertising campaign and salings on energy efficiency appliances in the big trade chains.

- Publishing on brochures, advertising and informational campaigns.
Types of CONTROL

2. Active control

The inspectors from the Commission for consumer protection performed control on the implementation of the ordinance for the labeling. If the control on the documentation is not enough, there have to be fulfilled technical control from accredited laboratory.
The sales on energy efficiency appliances in Bulgaria is growing up

<table>
<thead>
<tr>
<th>Year</th>
<th>Refrigerators class A++</th>
<th>Refrigerators class A+</th>
<th>Washing machines class A</th>
<th>Driers class A</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0%</td>
<td>9,6%</td>
<td>20,0%</td>
<td>5,5%</td>
</tr>
<tr>
<td>2010 г.</td>
<td>3%</td>
<td>13%</td>
<td>70%</td>
<td>10%</td>
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</tbody>
</table>

- Refrigerators class A++
- Refrigerators class A+
- Washing machines class A
- Driers class A
Thank you!

Kolio Kolev
Executive Director

Energy Efficiency Agency - Bulgaria