

**Second Workshop of the Project:  
Long Term Agreements (LTA) for energy efficiency  
improvements in Bulgarian industry**

**Sofia, 17 May 2006**

**Study on Contextual Issues, Concerning  
Energy Efficiency in Industry in Bulgaria**

**Task 2.1**

**Ilian Jeliazkov**

**ilian@esdb.bg**

**+359 2 9808306**

**ESD Bulgaria Ltd.**

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### **The period 1979 - 1989:**

Substantial support of energy efficiency activities, but in conditions of comparatively low energy prices;

### **The period since 1990:**

- Sharp increase of energy prices;
- Easier availability of modern equipment;
- Restructuring of the industrial sector (decrease of energy intensive activities);
- Influence of reduced load operation;
- Quite modest financial support;

## Historical overview and current status of EE of Bulgarian industry (2)



### Example: Energy savings from implemented energy efficiency projects in Bulgaria during the period 2001 – 2003

Number of energy efficiency projects	Investment, million USD	Energy savings, million kWh annually				Emission reductions, thousand tonnes of CO <sub>2</sub> annually
		Heat	Electricity	Various types of fuel	Totals	
212	32.4	37.4	49.4	711	797.8	262

**Overall investment: 32,4 million USD**

**Overall annual savings: 68 million USD**

**Payback period: less than half an year**

**Source of information: “Bulgarian Energy Sector 2001 – 2004”**

### **Institutions, active in the area of energy efficiency:**

- **Ministry of Economy and Energy**
- **Energy Efficiency Agency**
- **Energy Efficiency Centre in Industry**
- **Regional energy centres and agencies – Sofia, Plovdiv, Rouse, Lovetch, Haskovo**
- **NGO's**
- **Companies from the energy efficiency sector**
- **Companies, registered for the obligatory energy audits – currently (in May 2006) are registered 9 such companies from 4 different towns**

### **Recent energy efficiency programmes:**

National Long-Term Programme for Energy Efficiency till 2015

National Short – Term Programme for Energy Efficiency 2005 – 2007

Branch Short – Term Programme for Energy Efficiency

Identified technical potential for energy efficiency improvements in industry: 15% - 30%

Target for the industrial sector, specified in the short – term programme:

39,5 ktoe (0,15% of the 2004 of the final energy efficiency consumption in industry)

## **Legislation:**

**Obligatory energy audits for large consumers (above 3 000 MWh annually – art. 17 and art. 18 of the Energy Efficiency Act, art. 6.1 of Regulation No. 21)**

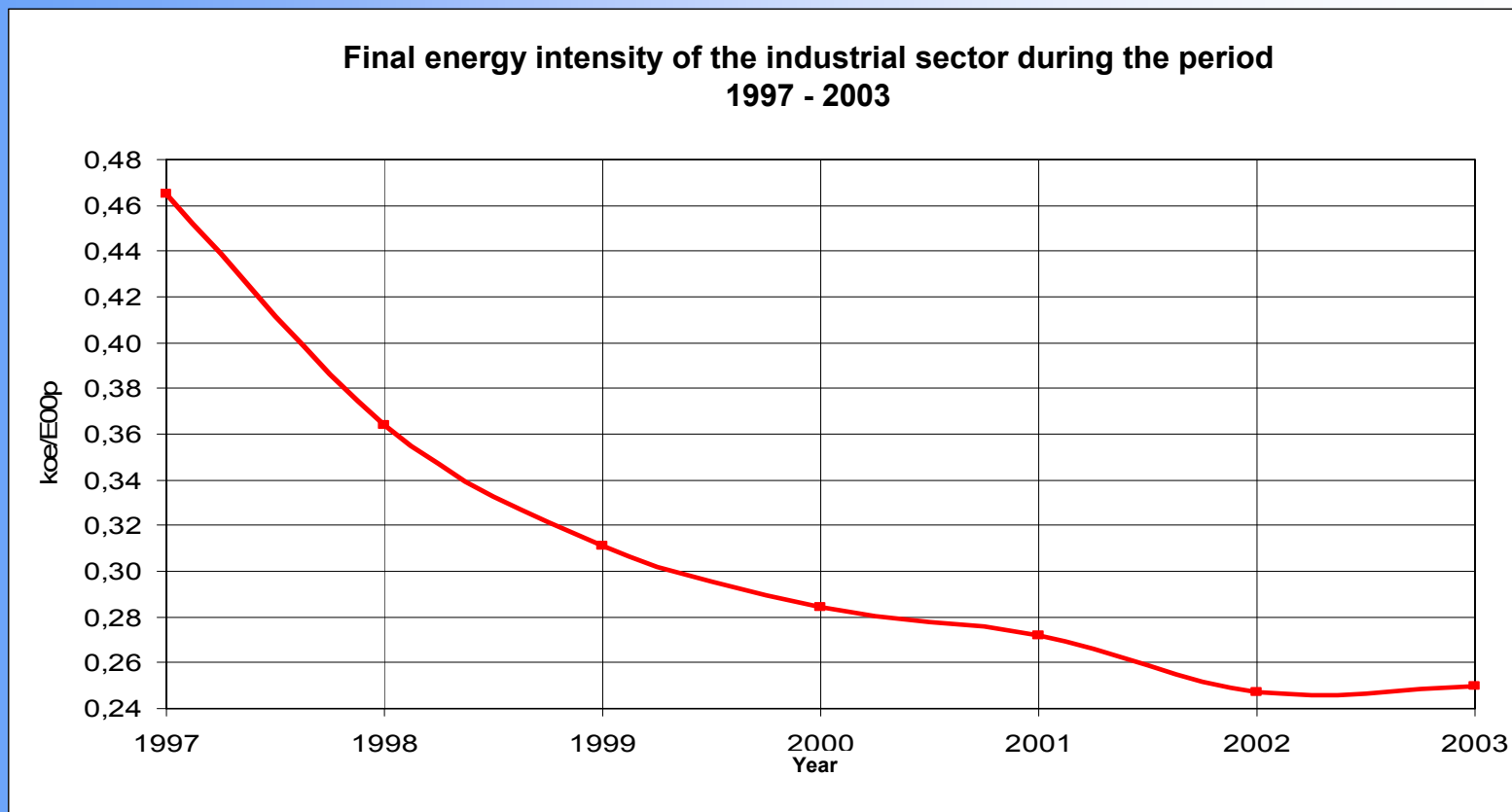
**It is interesting to note that currently the number of such companies in Bulgaria is 330 (with 352 sites) and they have about 80% of the overall energy consumption in industry.**

## **Types of energy efficiency criteria:**

- Related to monetary indicators
- Related to physical output



## Historical overview and current status of EE of Bulgarian industry (7)

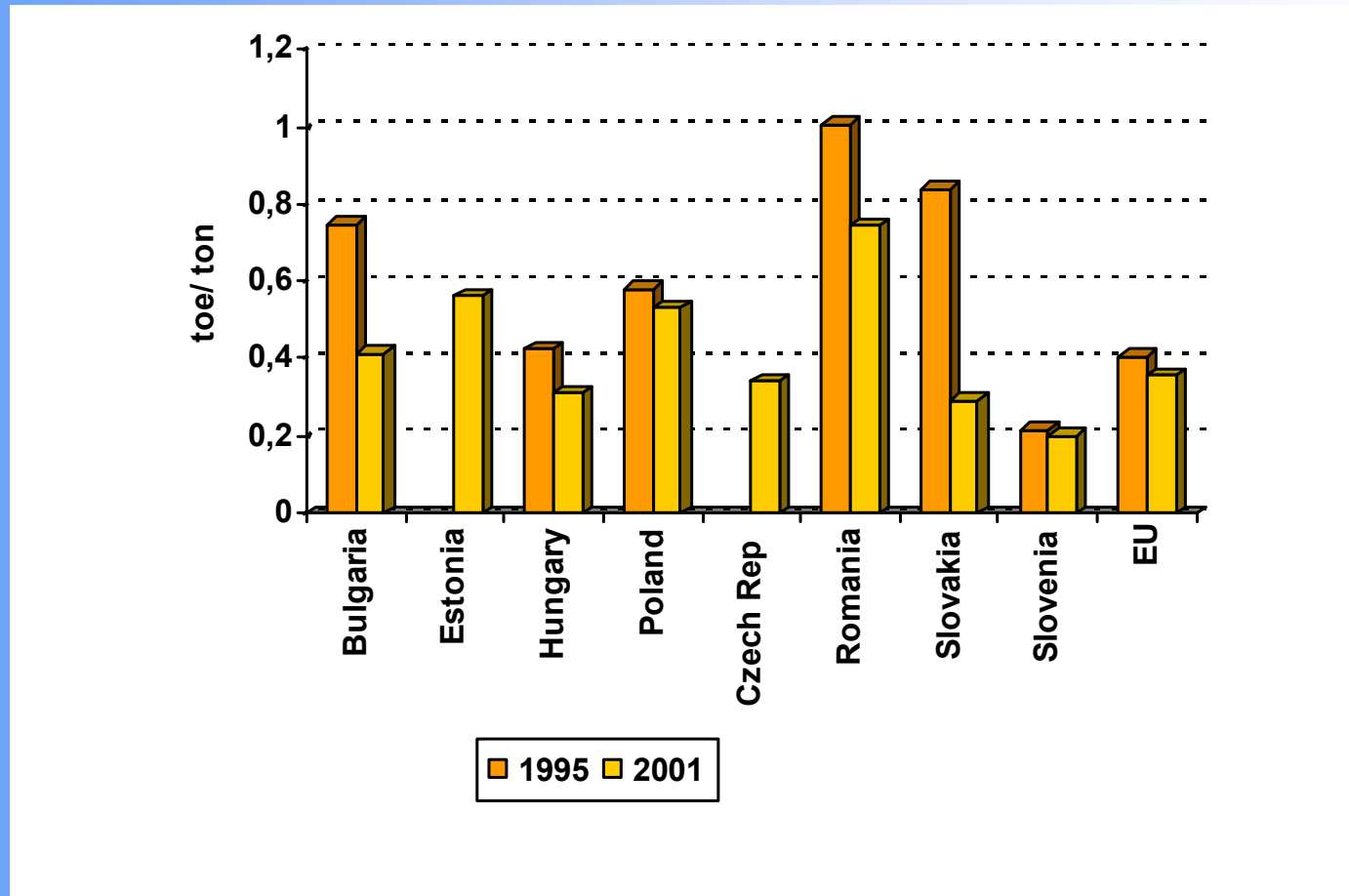


Source: National Long-Term Programme for Energy Efficiency till 2015

# Historical overview and current status of EE of Bulgarian industry (7)



## Unit energy consumption of paper production:



Source: B. Lapillonne, Enerdata

## Social, financial and legal thresholds for improvement of EE



### Social threshold:

- Improved social status of professionals, involved in energy efficiency activities.

### Financial threshold:

- Improved communication between technical experts and financial decision makers.

### Legal threshold:

- Increased level of legal support of energy efficiency activities (e.g., equal status and same preferences as high technology activities and innovations).

### 1) Applicability of LTA in Bulgaria – all answers are positive

Some quotations of reasons for such answers:

- Because of the voluntary principle of participation in the scheme;
- Because the national administration will take some obligations;
- Because LTA can contribute for organizing of the implementation of the recommendations from the obligatory energy audits.

### 2) Approach for target formulation – various answers as follows:

- Targets should be specified by national authorities: 2 participants from industrial plants + 5 participants from national authorities + 1 participant from NGO's and consultants
- Targets should be specified by each individual company: 1 participant from industrial plant, 6 participants from national authorities
- Targets should be specified by both parties: 1 participant from industrial plant + 1 participant from NGO's and consultants
- Targets should be specified by a third (independent) party: 1 participant from industrial plant

### 3) Approach for monitoring of the results – again various answers:

- In favour of an independent institution: 2 answers from industrial plants + 2 answers from industrial branch organizations + 3 answers from + 3 answers from governmental institutions + 2 answers from
- In favour of a governmental agency: almost all answers from governmental institutions.
- Suggesting that both contractual parties should be involved: 1 answer from industrial plant.

### 4) What types of technical and information support should be provided to industrial companies:

- Information about possibilities for funding of investment projects;
- Access to data bases and industrial branch analyses of EU countries;
- Summary information about typical effectiveness of various energy efficiency measures;
- Description of good practice examples;
- Catalogue information about energy efficiency equipment, including price data;
- Feasibility analysis of specific cases, etc.

## 5) Suggested financial support instruments:

- Tax relieves;
- Funding of energy audits.
- + Simplification of administrative procedures (related to energy efficiency improvements).



## Possible interactions between LTA and currently pursued energy efficiency policies



- Complementarities between LTA and energy audits.
- The EU Emission Trading Scheme and the Benchmarking Covenant

## Expected positive results from application of LTA in Bulgaria



- Introduction of a voluntary approach in an area, which traditionally was subject to obligatory requirements.
- Increased awareness of the environmental importance of energy efficiency.
- Will contribute for clearly specifying and organizing of support from national authorities for energy efficiency activities.
- Will accelerate energy efficiency activities.
- Will improve communication between industrial operational staff and specialized energy efficiency experts.

### **Suggested design characteristics of a LTA scheme for Bulgaria:**

- Clearly specified incentives for the industrial participants in the scheme.
- Bottom-up decentralized approach for target formulation.
- The energy efficiency index should be based on physical output, with an optional index concerning non-renewable energy consumption only.
- Obligatory requirements concerning the implementation of energy management systems or low-investment measures.
- Monitoring performed by a governmental agency (or independent agency), with the participation of a steering committee of industrial representatives.

# Thanks!

Ilian Jeliazkov

[ilian@esdb.bg](mailto:ilian@esdb.bg)

[www.esdb.bg](http://www.esdb.bg)