



**Project**

**Promotion of efficient heat pumps for heating**

**( ProHeatPump)**

**EIE/06/072 / S12.444283**

**Deliverable N°26**

**Short reports including proposals for appropriate policy interventions**



**Intelligent Energy**  **Europe**

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## THE GENERAL LAW

The Law for the RES and biofuels , State journal No.49/19.06.2007, No.98/14.11.2008.  
Apart of stimulation of the electricity from RES, it is introduced also a stimulation mechanism for heat production and energy for cooling, incl. biomass, by issuing Certificated of origin.

Energy Efficiency Law, State journal No.98/14.11.2008.

For new buildings with total constructed area over 1000sq.m. is needed the project to be adjusted to the possibilities for use of:

- ✿ decentralized systems for production and use of energy from RES
- ✿ co-generation plant
- ✿ installations for central or local cooling and heating
- ✿ heat pumps

For refurbishment of the existing buildings, apart of measures for improving the thermo-isolation of the building, after calculations of the energy efficiency, it might be possible to implement also measures for introducing thermo-solar installations and replacement of the existing heating with RES based one ( biomass or other similar, geothermal energy, heat pumps)

## THE NEW ENERGY POLICY FOR EUROPE

- ✿ Reducing the CO2 emissions by 20% until 2020 ( for Europe the basic year is 1990, for Bulgaria the basic year is 1988)
- ✿ Reducing the energy consumption with 20% comparing with the forecast for the year 2020
- ✿ Increasing by 20% the part of the RES in the total energy consumption of the EU till the year 2020
- ✿ Obligatory for each country member minimum of 10% part of the bio-fuels in the total fuel consumption for the transport in the EU until the year 2020.

Draft of the Directive for stimulation of the use of the energy produced by RES

- ✿ Introduction of an obligatory aims for the total part of the energy produced by RES for each country – EU member.
- ✿ Defining rules on administrative procedures, guarantees for origin and switch on the electro energy grid
- ✿ Defining eco-criteria on the sustainable bio-fuel production and other liquid fuels from biomass.
- ✿ National action plans

## NATIONAL ACTION PLAN

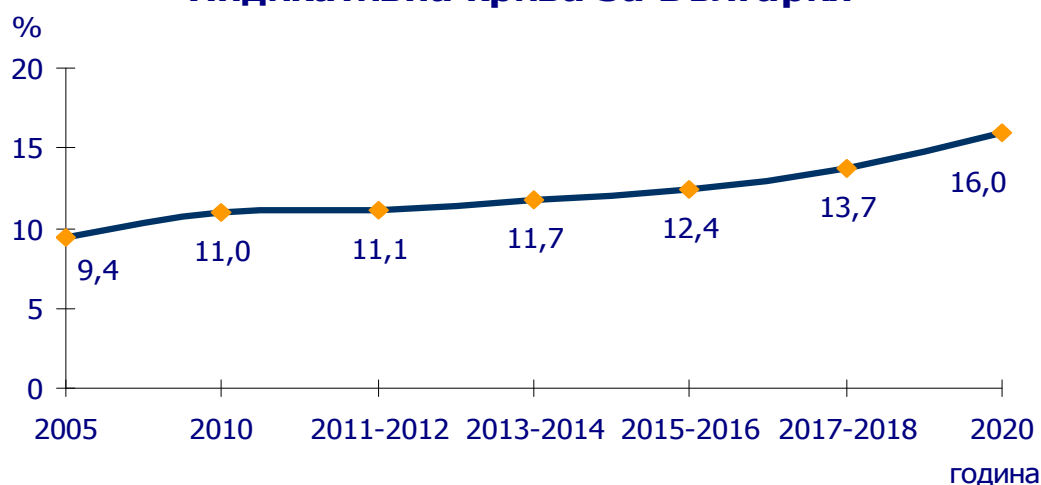
- ✿ Forecast for the end energy consumption by subsectors – electro energy, transport, heating, cooling in the year 2020.
- ✿ National sectoral aims for the year 2020 and forecasted part of RES energy in the electro-energy, heating and cooling, and the transport.
- ✿ Measures to reach the goals
- ✿ Implemented schemes for supporting the use of the energy from RES in the following sectors: electro-energy, heating and cooling, and the transport

- ✿ Evaluation of the total forecasted contribution of each technology for energy production from RES and for the energy efficiency, with a view to the implementation of the aims for the year 2020.
- ✿ Оценки на общия очакван принос на всяка технология за производство на енергия от ВЕИ и на енергийната ефективност с оглед изпълнение на целите за 2020 г.

#### NATIONAL GENERAL AIM FOR BULGARIA – 16 %

- ✿ Share of the RES in 2005 – 9,4 %
- ✿ Fixed stake of 5,5 %
- ✿ Supplement, defined on the base of the GDP per capita – 1,1 %

#### Индикативна крива за България



#### CONCLUSIONS:

- ✿ Decreasing of the energy intensity of the Bulgarian economy
- ✿ Increasing the competitiveness of the Bulgarian SMEs
- ✿ Diversification of the energy supplies
- ✿ Sustainable development
- ✿ Decreasing the harmful impact on the environment
- ✿ Limitation on the climate change
- ✿ Implementation of the aims of the new Energy policy for Europe

Specifying the general constrains for the use of the national geothermal sources in Bulgaria  
Results and recommendations:

#### **Preconditions:**

- Bulgaria is reach of geothermal sources – over 700 investigated sources
- The geothermal sources in Bulgaria are public property
- The investigated theoretical potential for direct use is about 6300 GWh/year
- Currently the installed power is about 94,5 MW, and the annual consumption is 380 GWh/годишно ;
- The geothermal energy is used for swimming pools, baths an balneology
- Only limited quantity is used for the heating of the building
- Only a small part of the resource is used for heating systems installments

The main aims of the round table are:

- (a) to evaluate and decreasing the current and potential obstacles for wider use of the geothermal resources in Bulgaria
- (b) to prepare and implement detailed technical and economical surveys for realization of projects for using the geothermal energy, and
- (c) to distribute the knowledge and experience of the project, aiming facilitation the further use of the geothermal energy

### **Stage I**

A. Determine the main constrains for use of the geothermal resources and data base review:

- Data collection and evaluation;
- Assessment of the energy potential;
- Environment impact assessment;
- Current and potential use;
- Determine of the main obstacles.

B. Recommendations for eliminating the main obstacles.

C. Organization of 1-day seminar

### **Stage II**

A. Feasibility studies

B. Baseline surveys for CO<sub>2</sub> reduction

C. Organization of a final seminar

Grouping the obstacles:

- Legal – Legislation, secondary legislation, definitions
- Institutional/organizational – Administration of licenses and permit ions, implementation of licenses, conflict of interests
- Financial – concession payments, existence of financial sources
- Market mechanism – determine tariff for competitive energy sources, existence of market, probable preferential status
- Technical – level of “know-how”, requirements to the installations
- Environment – reinjection of the flow
- Social – protection of the springs, protection from the non-authorized use

Classification of the main obstacles

- Fatal obstacles, which prevent the implementation and which must be eliminated immediately ( obstacles-killers)
- Blocking obstacles, which represent threat for successful implementation and which must be eliminated in fixed terms of time
- Main obstacles, which delay the process and sometimes obstructs the projects to be implemented and which must be eliminated in fixed terms of time
- Secondary obstacles, which represents source of problems and delays, and which should be eliminated during their appearance.