



**National Energy Regulatory Authority**

***LAST DEVELOPMENT ON ENERGY  
EFFICIENCY AND RENEWABLE  
ENERGY IN ROMANIA***

**Corneliu RADULESCU  
Energy Efficiency Regulatory Department**

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



**National Energy Regulatory Authority**

**Legislation**

- **2006:** EU adoption of Directive 32/2006 on end-user energy efficiency and energy services and adoption of the Framework Action Plan for Energy Efficiency
- **2007:** Development of the First National Energy Efficiency Action Plan (PNAEE)
- **2008:** Amendment of Law No. 199/2000 on efficient use of energy, as republished based on the transposition of Directive 32/2006 in Government Ordinance 22/2008 on energy efficiency and promotion of use of energy renewable sources at the end users.

Improving energy efficiency is one of the key priorities of Romania's energy policy. In this context, the legislative and institutional frame was created in our country according to the community Acquis for promoting energy efficiency.

PNAEE lays down the energy efficiency measures to be implemented in order to achieve assumed energy savings of 1.5%/year against the average over 2001-2005.

- Involving all political decision makers at all management levels as well as all players in the energy efficiency market
- Changing the domestic market so as to be able to offer the most up-to-date infrastructure, buildings, instrumentation, processes, means of transport and energy systems
- Awareness in the public at large of efficient energy use.

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

[thou toe]

Average final energy consumption covered by ESD (2001-2005)	20,840
9% energy savings by 2016	1,876*
National energy saving target by 2016	2,800**
Intermediate energy saving target by 2010	940***

\* Minimum value according to the Directive 2006/32/EC

\*\* 13.5 % of average finale energy consumption 2001 - 2005, respectively 1.5% annualy

\*\*\* 4.5 % of average finale energy consumption 2001 - 2005, respectively 1.5% annualy

In present, the Ministry of Economy, Trade and the Business Environment is coordinating the elaboration of the second National Action Plan on Energy Efficiency.

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### Actions to promote energy efficiency measures

- ✓ **Increasing industrial operators energy efficiency by management of the energy demand based on the energy audit preparation**
  - Energy management responsible authorization at economic operators with a total annual energy consumption exceeding 1,000 toe/year – **261 energy managers**
  - Authorization of energy auditors in industry – **165 natural person and 34 legal bodies**
- ✓ **Increasing industrial operators energy efficiency by signing the Long Term Voluntary Agreements**
- ✓ **Co - financing investments in energy efficiency measures and RES application**

**2006 – 2007** : Implementation of the National Program for Energy Costs Cutting for the population by increasing energy efficiency and renewable energy use

**2008** : Launching the National Program for Energy Efficiency Improvement and Renewable Energy Sources use in the Public Sector

**2009 - 2010** : Continuing the implementation of National Programs while increasing the allocated funding particularly in public buildings rehabilitation and using renewable energy sources

**2009** - 25 projects; 4 mil. Euro; 120.521 toe

**2010** – 7 projects; 1 mil. Euro; 55.000 toe

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### Actions to promote energy efficiency measures

✓ The Program for Thermal Rehabilitation of block of flats is developed by the Ministry of Regional Development and Tourism (50% state budget; 30% local budget and 20% from the owners)

2010 and 2011 – around 37 mil. Euro each year

✓ Promoting high efficiency cogeneration – implementation of the Directive 2004/8/CE for promoting cogeneration based on useful energy demand in the domestic market - transposed in the Romanian legislation by Government Decision No. 219/2007 (in 2011 GD impose a contribution to finance high efficiency cogeneration units – 0,46 Euro cents/Kwh)

### ESCO DEVELOPMENT

- Elaboration of the Energy Performance Contract - sets out the measures to be implemented and guarantees securing energy savings
- ESCO development promotion campaigns in Romania - seminars related to implementing the legislation on efficient energy use for industrial operators and local authorities.
- Implementing the concept in the public sector jointly with the Energy Agency of Berlin, and elaboration of the frame legislation for ESCO development – 10 projects identified from which 2 already done (schools) and 1 ongoing (hospital)

Other financial schemes to support energy efficiency and RES projects:

- Romanian Fund for Energy Efficiency (25 projects/13,5 mil. USD)
- BERD energy efficiency in industry credit line (46 projects/34,7 mil. Euro)

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### NATIONAL POTENTIAL OF RES

RES	Annual potential	Application
Solar energy	60 PJ 1,2 TWh	Thermal energy Electricity
Wind energy	23 TWh	Electricity
Hydro Micro hydro	36 TWh 3,6 TWh	Electricity
Biomass	318 PJ	Thermal energy Electricity
Geothermal energy	7 PJ	Thermal energy

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### NATIONAL ENERGY STRATEGY IN THE PERSPECTIVE OF THE YEAR 2020

- The share of RES in the final national consumption of energy:
  - **24% in 2020,**  
**established by Directive 2009/28/CE**
- The share of E- SRE in the final consumption of electricity:
  - **33% in 2010,**
  - **35% in 2015 and**
  - **38% in 2020,**  
**established by the Romanian Energy Strategy for the period 2007-2020 and also by the Law 220/2008 republished, for promotion energy from RES**

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### II. New Scheme for Promoting E-RES - Law no. 220/2008

The E-RES promotion system shall be applied for the electricity supplied to the network, produced from:

- a) hydro energy used in plants with installed capacity up to 10 MW;
  - b) wind energy;
  - c) solar energy;
  - d) geothermal energy;
  - e) biomass;
  - f) bio-liquids;
  - g) biogas;
  - h) landfill gas;
  - i) sewage treatment plant gas.
- for the power plants/units commissioned, respectively refurbished until the end of 2016.

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### E-RES PROMOTING SYSTEM IN ROMANIA

(2)

RES type	Type of electric unit / plant	Number of GC/MWh	Period (years)
1. Hydraulic energy – used in electric power plants with $P_i \leq 10$ MW	new (commissioned after January 1 <sup>st</sup> , 2004)	3 GC	15
	upgraded	2 GC	10
	commissioned by January 1 <sup>st</sup> , 2004 and not upgraded	0.5 GC	3
2. Wind energy	new	2 GC by 2017	15
		1 GC as of 2018	
3. Biomass, biogas, bioliquids, geothermal energy, gas from waste processing, sludge fermentation gas in waste water treatment plants	new	3 GC	15
	high efficiency cogeneration (additionally over 3 GC)	1 GC	15
4. Solar energy	new	6 GC	15

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### E-RES PROMOTING SYSTEM IN ROMANIA (4)

- GC are issued to E-RES producers by TSO and are sold on the GC centralized market and/or on the GC bilateral contracts market to the electricity suppliers of the end-users;
- The electricity suppliers have the obligation to purchase yearly a number of GC equal to the value of the mandatory annual quota for green certificates for the year in question multiplied with the amount of electricity in MWh, supplied annually to end consumers by each; ANRE has to elaborate a methodology for establishing the annual quota of green certificates, which will be approved by order of the president of ANRE;
- The electricity supplier who does not meet the mandatory annual quota has to pay the equivalent of the green certificates not acquired, at 110 euro/GC.
- The amount resulted shall be collected by the TSO and goes to the Environment Fund in order to finance the projects of E-RES facilities with installed power of up to 100 kW developed by natural persons;

ENERGY BETWEEN DANUBE AND CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### E-RES PROMOTING SYSTEM IN ROMANIA (5)

- ❑ *The green certificates trading value on the green certificate market is established through competition mechanisms and can vary between the following legal limits:*
  - a) **a minimum trading value of 27 euro/GC** and
  - b) **a maximum trading value of 55 euro/GC**calculated in lei at the average exchange rate established by the Romanian National Bank for December of previous year.
- ❑ maximum and minimum trading values of GC are established up to 2025, included;
- ❑ starting with 2011, the price limits will be indexed annually by ANRE according to the average inflation rate in the month of December of the previous year, calculated for UE 27 countries, officially communicated by EUROSTAT;
- ❑ after 2025, no maximum limit will apply; the trading value for GCs shall be the one set on the green certificate market but it cannot be lower than the minimum trading value applied in 2025, indexed annually;

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### NEXT STEPS FOR APPLYING LAW NO. 220/2008 (1)

- a) **Completion and issuance of ANRE regulations:**
  - i. *E-RES producers' qualification regulations for applying the promoting system;*
  - ii. *GC market organization and operation regulation;*
  - iii. *Methodology for establishing the GC procurement rates per annum;*
  - iv. *Regulation regarding GC issuance.*
- b) **Promoting the Government Decisions on:**
  - i. *promoting the use of biofuels and bioliquids;*
  - ii. *taking over excess GC and E-RES statistic transfers;*
  - iii. *regulation on the issuance of the guarantees of origin.*

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

### NEXT STEPS FOR APPLYING LAW NO. 220/2008 (2)

- c) Calculation of penalties for failure to achieve the mandatory quota for the year 2010 by the suppliers (April 2011);
- d) Obtain the authorization of the support scheme of Law no.220/2008 from the European Commission;
- e) Qualification of the E-RES producers to beneficiate of the promoting system according to Law 220/2008 republished (year 2011).

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011



## National Energy Regulatory Authority

**Thank you for your attention !**



**Contact us:**  
National Energy Regulatory Authority (ANRE)  
4, Soseaua Cotroceni  
Bucharest 060114,  
ROMANIA  
<http://www.anre.ro>  
Tel: +40 (0)213033815 ; Fax: +40 (0)213033807  
E-mail: [corneliu.radulescu@anre.ro](mailto:corneliu.radulescu@anre.ro)

ENERGY BETWEEN DANUBE AND  
CAUCASUS, Vienna 28 - 29.04.2011