

National Renewable Energy Action Plan (NREAP)

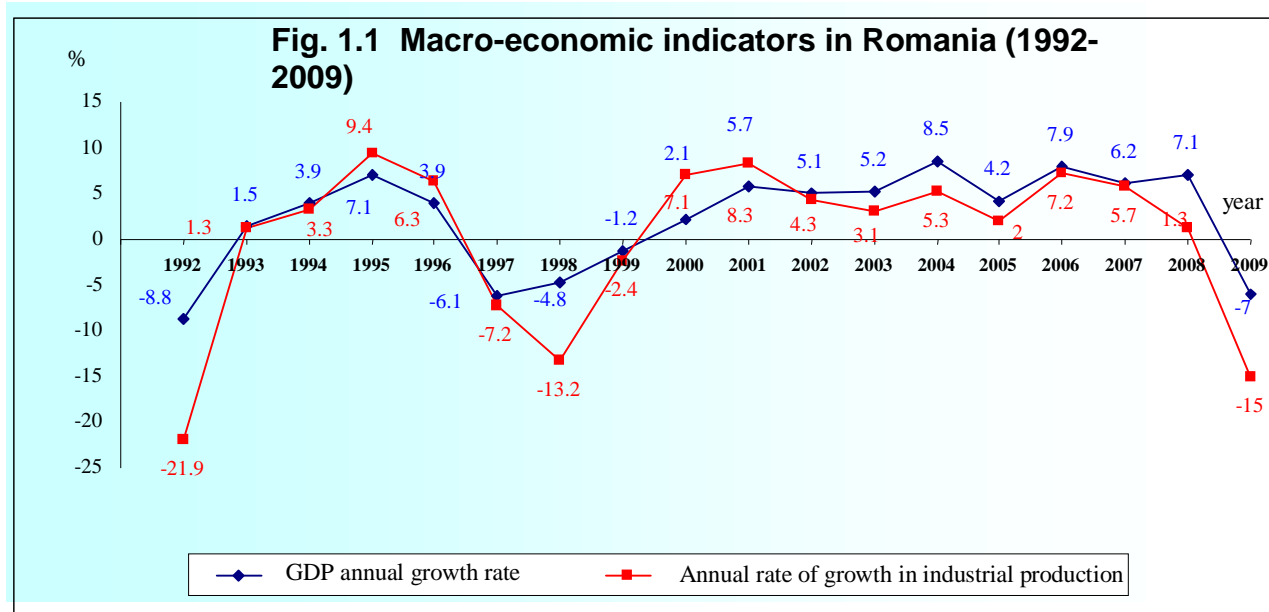
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1. THE NATIONAL RENEWABLE ENERGY POLICY – SUMMARY

- The Romanian national renewable energy policy was drafted and implemented in the difficult context of economic phenomena specific to transition from centralized economy to market economy, and during the recent years, post-transition.

In the last decade, the main concerns and activities of decision makers at national level aimed at economic restructuring and demonopolisation, privatisation and



introduction of market economy mechanisms. Within this period, the RES exploitation had a secondary role. In the context of industrial restructuring and ownership transfers (from the state sector to the private sector) a number of RES exploitation installations established during the centralised economy were physically destroyed. The RES exploitation became an important component of the national energy policy at the beginning of this decade, in the context of overcoming the transition period and the EU approach. The signing of the Accession Treaty (in April 2005) and the granting of EU membership (starting with 1 January 2007) represented important events in the Romanian contemporary history. The adoption of the Community acquis in terms of energy resulted in significant effects for the exploitation of SRE.

- Romania was the first country specified in Annex 1 of UNFCCC which, by means of Law No 3/2001, that approved the Kyoto Protocol, being obliged to reduce by 8% greenhouse gas emissions in comparison with the base year 1989, for the first engagement period 2008-2012.

In order to take part in the flexible mechanisms of Kyoto Protocol, Romania must meet the eligibility criteria defined in the Marrakesh Agreements (approved during the Seventh Conference of UNFCCC Parties and entered into force in 2005 following the First Conference of Kyoto Protocol) as follows:

- Ratification of the Kyoto Protocol;

- Calculation and recording of assigned quantities in accordance with relevant Decisions;
- Establishment of a national system for estimating GHG emissions resulting from sources and seizing withholdings;
- Establishment of a national register;
- Submission of the most recent inventory;
- Submission of additional information on the assigned quantity and performance of necessary adjustments.

Thus, Romania applies the mechanism “Joint Implementation”, as host country starting with 2000.

Many of the approved projects are developed at local authorities’ level and aim at the use of renewable energy sources – sawdust, geothermal energy. Such investments have a positive impact not only by the reduction of greenhouse gas emissions but also on the environment in general or from social point of view.

The legal framework for the development of such projects within the Joint Implementation mechanism is represented by the conclusion and approval of Memoranda of Understanding with different states (table 1.1). Romania signed 10 such Memoranda of Understanding, following the conclusion of other such agreements with other developed countries.

Table 1.1

Document name	Approving law
Memorandum of Understanding between the Government of Romania and the Government of Switzerland	Law 201/2001
Memorandum of Understanding between the Government of Romania and the Government of Netherlands	Law 368/2002
Memorandum of Understanding between the Government of Romania and the Government of the Kingdom of Norway	Law 302/2003
Memorandum of Understanding between the Ministry of Water and Environmental Protection of Romania and the Federal Ministry of Agriculture, Forests, Environment and Water Management of Austria	Law 584/2004
Memorandum of Understanding between the Government of Romania and the Government of the Kingdom of Denmark, signed in Copenhagen	Law 532/2004
Memorandum of Understanding between the Government of Romania and the Government of the Kingdom of Sweden	Law 587/2004
Host Country Agreement with the International Bank for Reconstruction and Development (World Bank), as	Law 57/2004

Document name	Approving law
mandatory of the Prototype Carbon Fund	
Memorandum of Understanding between the Government of Romania and the Government of the Republic of France	Law 104/2005
Agreement between the Government of Romania and the Government of the Republic of Finland on the cooperation for emissions joint implementation and international marketing based on the Kyoto Protocol to the Framework Convention of United Nations on Climate Change	Law 377/2007
Memorandum of Understanding between the Ministry of Environment and Water Management of Romania and the on Climate Change Cooperation	GD 1240/2007

To date, out of the 16 investment projects of *Joint Implementation* - JI type undergoing different stages of development, 6 projects of JI type aim at promoting renewable energies. These projects are:

- "Rumegu• 2000" – based on the sawdust use technology as energy source within the central heating system of 5 cities which was developed based on the cooperation with Denmark;
 - Modernisation of 4 hydro-aggregates within Hidrocentrala Por•ile de Fier II – a project developed within the cooperation with Netherlands;
 - Modernisation of 3 hydro-aggregates within Hidrocentrala Por•ile de Fier I - a project developed within the cooperation with Netherlands;
 - "Use of geothermal energy within the central heating system of Oradea – area 2 and Beiu•", a project developed within the cooperation with Denmark;
 - Recovery of biogas from the waste landfills of Foc•ani and T•rgu-Mure•;
 - Use of biomass for producing energy in Neam• County.
- Within the context of EU accession negotiations, the **Energy Roadmap for Romania was drafted and approved by the Government by GD 890/2003**. The document shows that RES shall be encouraged; they represent an internal source that may contribute to the reduction of imports and the improvement of energy supply safety in compliance with environmental protection conditions.
The costs related to initial investments in energy are very high which represents a restrictive factor for their development. In order to overcome this obstacle, a stimulating programme shall be initiated which shall also include a financial component.
The conclusions contained in the document specify that large-scale use of RES represents one of the three major development directions for the energy sector in the perspective of 2015 (the remaining two major directions are represented by the reduction of energy intensity in the economy, namely the settlement of electricity transactions crossing the border of one or more countries).
 - One important role was held by the **Strategy for Using Renewable Energy Sources approved by GD 1535/2003**.

The type of resources and the energy potential of renewable energy sources in Romania are summarised in Table 1.2.

Table 1.2. Energy potential of renewable energy sources in Romania

Renewable energy source	Annual energy potential	Economic energy equivalent (thousand toe)	Application
Solar energy:			
- thermal	60x10 ⁶ GJ	1,433.0	Thermal energy
- photovoltaic	1,200 GWh	103.2	Electrical energy
Wind energy	23,000 GWh	1,978.0	Electrical energy
Hydro energy out of which:	40,000 GWh	3440.0	Electrical energy
under 10 MW	6,000 GWh	516.0	Electrical energy
Biomass	318x10 ⁶ GJ	7,597.0	Thermal energy
Geothermal energy	7x10 ⁶ GJ	167.0	Thermal energy

The usable potential of these energy source is much smaller, on account of technological limitations, economic efficiency and environmental restrictions.

The general objectives of the Strategy for the exploitation of renewable sources of energy were as follows:

- integration of renewable energy sources into the structure of the national energy system;
- reduction of technical-functional and psychological-social barriers within the process of using renewable energy sources, together with the identification of cost elements and economic efficiency;
- promotion of private investments and creation of conditions necessary to facilitate access of foreign capital on the renewable energy sources market;
- guarantee of independent energy consumption for the national economy;
- guarantee, as applicable, of energy supply for isolated communities by using the local renewable sources potential;
- provision of necessary conditions for the participation of Romania in the "Green Certificates" European market for renewable energy sources.

Each RES was separately analysed (solar energy, wind energy, hydro energy, biomass and geothermal energy) and specific targets were presented.

According to the Strategy, the main medium and long term options should be targeted towards the following main directions:

- transfer of unconventional technologies from companies that have a tradition and experience, with rules on implementation, attestation and certification in accordance with international standards in force;
- drafting and implementation of the appropriate legal, institutional and organisational framework;
- developing relationships with the private and public sector for the financing, management and exploitation under efficient conditions of modern energy technologies;
- identification of financing sources for sustaining and developing applications for the use of renewable energy sources;
- stimulating the establishment of joint-venture companies specialised in the use of renewable energy sources;

- drafting of research-development programmes aiming at accelerating the integration process of renewable energy sources into the national energy system.

The strategy established specific medium and long term objectives as follows:

- for the period 2003-2010: commissioning of new units with a total installed capacity of approximately 441.5 MW (electric energy), namely 3,274.64 thousand toe (thermal energy);
- for the period 2011 – 2015: installation with a total capacity of 789.0 MW (electric energy), namely 3,527.7 thousand toe (thermal energy).

As regards the energy production obtained from RES, the Strategy established the following quantity objectives:

- for 2010: 19.65 TWh (electric energy) and 3,274.64 thousand toe (thermal energy);
- for 2015: 23,37 TWh (electric energy) and 3,527.7 thousand toe (thermal energy).

The Strategy established as targets shares of E-RES within the production of electric energy of approximately 30.0% in 2010, namely 30.4% in 2015.

NB: These targets have been subsequently changed upwards, the present values being of 33% for 2010, 35% for 2015 and 38% for 2020.

Table 1.3 The expected production of electric energy from renewable energy sources on medium and long term

Renewable energy sources	2010 (GWh)	2015 (GWh)
Solar energy	1.860	11.600
Wind energy	314	1,001
Hydro energy - total, out of which: low power hydro energy (max 10 MW)	18,200 1,100	18,700 1,600
Biomass	1,134	3,654
Geothermal energy	-	-
Total	19,650	23,367
E-RES share in the consumption of electric energy	30.00%	30.40%

Certain values presented were subsequently reassessed. In most cases, reassessments aimed at the increase of the quantity level of set objectives in accordance with general objectives at EU level and the commitments undertaken by Romania during the accession negotiations.

A comparison between initial assessments for 2010 and the actual achievements is not yet possible since statistical data is missing. Information on actual achievements made during the past years shall be subsequently presented.

Besides the quantitative aspects, it must be emphasised that the strategy had an extremely important role in the determination of a well-established orientation at all levels as regards the use of RES.

- During the following period, a number of statute/legal documents have been drafted aiming at the promotion of E-RES.

DG 443/2003 on the promotion of electricity production from renewable energy sources (amended by GD 958/2005) established a number of measures among which:

- Emission of guarantees of origin for the electricity obtained from RES based on a regulation drafted by ANRE (Romanian Energy Regulatory Authority);
- Issuing by ANRE of a number of regulations on electricity market operation rules providing for the priority takeover and marketing of electricity obtained from RES;
- Obligation of grid operators to guarantee the transmission and distribution of electricity obtained from RES without endangering the reliability and safety of grids;
- Reduction of regulation barriers and other barriers to the increase of RES electricity production; simplification and acceleration of authorising procedures.

Directive 2001/77/EC was transposed in the Romanian legislation by this GD.

GD 1892/2004 (amended by GD 958/2005 and GD 1538/2008) introduced the obligatory quota system combined with green certificates trading as support mechanism for the promotion of RES electricity production. The document contains provisions on the application method for this system.

The following obligatory quotas have been established as annual percentage values of the electricity gross consumption: for 2006, 2.2%, for 2007, 3.74%, for 2008, 5.26%, for 2009, 6.78% and starting with 2010, 8.3%.

In order to accelerate the production of E-RES, the Romanian Parliament adopted Law 220/2008 on the establishment of the promotion system of the energy produced from RES. The law modifies the annual target level and the number of GCs issued for the electricity produced from RES by introducing differentiations per types of sources.

At the beginning of June 2010, the Parliament approved a law amending Law 220/2008. By this amendment, provisions of Art. 1-4, Art. 6-10, Art. 12, Art. 15(1) and Art. 16(2) - (6) of Directive No 2009/28/EC of the European Parliament and Council of 23 April 2009 on promotion of use of energy from renewable sources are transposed.

At present, this law is being adopted by the President of the Republic and shall enter into force following its publication in the Official Journal. The promotion system of the production of energy from RES is presented in detail in Chapter 4.3.

- In the context of the EU accession, the Romanian Government drafted the National Development Plan 2007-2013 (NDP). The use of RES is treated both in the Chapter "Analysis of the current situation" and in the Chapter "Development Strategy". NDP presents the RES potential, the information contained in the use strategy previously presented being retreated.

NDP represented the strategic planning document that guides and stipulates the social-economic development of Romania in accordance with EU development policies.

In order to achieve the global objectives and the ones specific to the period 2007-2013, the considered measures and activities are grouped in **six national development priorities**:

- Increase of economic competitiveness and development based on knowledge;
- Development and modernization of transmission infrastructure;
- Protection and improvement of environment quality;
- Development of human resources, promotion of employment and social inclusion and enforcement of administrative capacity;

- Development of rural economy and increase of productivity in the agricultural sector; reduction of development discrepancies between different regions of the country.

The use of RES is considered to be a sub-priority within the first priority.

Due to the fact that the energy produced from renewable energy sources is “clean” energy, the use of such sources offer an alternative to the energy produced from fossil fuels. At the same time, the use of renewable energy resources available shall contribute to the integration of certain isolated areas in the economic circuit. Romania shall intensify the actions related to the use of renewable resources and is concerned, particularly on medium and long term, with the use of renewable energy resources for the production of electrical and thermal energy thus contributing to the encouragement of innovative technologies development and the practical use of new technologies.

According to the acquis on the European Union Cohesion Policy, Romania drafted the **National Strategic Reference Framework 2007-2013 (NSRF)**, as reference document for the planning of Structural and Cohesion Funds during the reference period.

NSRF links the national development priorities, established in the National Development Plan 2007-2013 and priorities at European level. NSRF extracts and synthesises the main elements included in the NDP Analysis and Strategy while they are reorganised depending on the 3 Priorities and the 11 Guidelines contained in the Community Strategic Guidelines, thus reflecting the classification of NSRF in the European principles of the Cohesion Policy.

As major difference between NDP and NSRF, we shall mention that, in terms of financing, NSRF is supported exclusively from the Structural and Cohesion Funds and the associated national co-financing (national and local investment programmes, external loans, European funds for rural development and fisheries etc.).

NSRF shall be implemented through the Operational Programmes within the “Convergence” and “European Territorial Cooperation” Objectives. The list of Operational Programmes drafted by Romania or in cooperation with other EU Member or non-Member States as well as institutions in charge with the management of such programmes shall be presented below.

Table 1.4

Sectoral Operational Programme (SOP)	Management Authority
Coordinator: Ministry of Public Finances Authority for the Coordination of Structural Instruments (ACIS)	
SOP Increase of Economic Competitiveness (IEC)	Ministry of Economy, Trade and Business Environment
SOP Transport	Ministry of Transport and Infrastructure
SOP Environment	Ministry of Environment and Forests
SOP Regional	Ministry of Rural Development and Tourism
SOP Human Resources Development (HRD)	Ministry of Labour, Family and Social Protection
SOP Administrative Capacity Development	Ministry of Administration and Interior
SOP Technical Assistance	Ministry of Public Finance

All abovementioned programmes have a certain importance for the promotion of the use of RES.

- SOP IEC, with a total funding (EFRD + National Budget) of approximately 3.011 billion Euro (out of which the EU contribution to EFRD represents 84.83%) five priority axes, among which Priority Axis No 4 - "Increase of energy efficiency and supply safety, in the context of fighting climate change" has, as major intervention field, domain 4.2: "Use of renewable energy sources for the production of green energy". The total funds granted to Axis 4 represent 24.08% of the total amount, namely approximately 725 million Euro. The Intermediary Body for the implementation of Priority Axis 4 operates within the Directorate General of Energy, Oil and Gas within MECBE, coordinating the Management Authority of SOP IEC. Financing programmes for investments performed within SOP IEC – Priority Axis 4 – Major Domain 4.2 are presented in Chapter 4.3.
- SOP Environment has six priority axes, among which Priority Axis 3 "Reduction of pollution and climate changes by restructuring and rehabilitating district heating systems in order to meet the energy efficiency targets in most polluted localities" may finance projects on the use of RES for district heating.
- SOP Regional has six priority axes, among which Priority Axis 1 "Support for sustainable development of cities – potential growth poles" also finances projects for the use of RES.
- SOP HRD may finance projects on education and vocational training in order to use RES.
- The National Programme for Rural Development 2007-2013 (NPRD) pays special attention to the issue related to use of RES. The document shows that the developing biofuel market has the necessary potential to change the current structure of agricultural crops. Romania has the potential to produce approximately 2 million tonnes of bioethanol and 400,000 tonnes of biodiesel by 2010. The document also shows the energy potential values for solar, wind, biomass and geothermal energy of the abovementioned energy efficiency strategy.
- Within NPRD, the State aid scheme "Stimulation of regional development by investing in agricultural and forestry product processing in order to obtain non-agricultural products" presented in Chapter 4.5. has been recently initiated.
- Law 315/28.06.2004 on regional development in Romania establishes the legal framework, objectives, competences and instruments specific to the regional development policy in Romania. The law expressly specifies that the use of local and regional resources in order to obtain sustainable economic-social development (NB: including also the use of RES) represents the main objective of the rural development policy in Romania.

On the Romanian territory, the following eight regional development regions are established:

- Development Region North-East;
- Development Region South-East;
- Development Region South-Muntenia;
- Development Region South-West Oltenia;
- Development Region West;
- Development Region North-West;
- Development Region Centre;
- Development Region Bucharest -Ilfov.

A Regional Development Council (RDC) shall be established for each region, as a deliberative body, with no legal status and which operates based on partnership principles for the purpose of coordinating activities.

Within each region, a Regional Development Agency (RDA) shall operate as a non-governmental non-profit, public body with legal status. Its organisational and functional status shall be approved by RDC. In practice, RDA represents the executive body of RDC.

The main objectives of RDC and RDA refer to the management of development funds granted by EU in the said area, strategic planning of economic and social development of the region, in cooperation with local players, promotion of cooperation and information and competences transfer between the business environment, the scientific and the technological environment and the development of projects with a major impact on regional development.

The beneficiaries of regional programmes and projects are public and private institutions (Local and County Councils, companies, NGOs, educational institutions and professional associations etc).

RDA has an extremely important role in the management process of structural and cohesion funds received by Romania from EU, acting in capacity of Intermediary Body for Regional Operational Programmes 2007-2013 (ROP) for the regions in question.

The use of RES represents an important component of regional strategies while the projects in question are significant in terms of number and value.

Thus, RDA West drafted the Regional Development Strategy 2007-2013 for the West Region, which represents a strategic planning document aiming at guiding and stimulating the economic and social development at regional level. In this document, the issue related to the renewable energy development is included in the theme Sustainable Development – Energy Infrastructure. Also in strategic terms, the West Region was the first development region in Romania to have drafted a Innovation Regional Strategy 2005-2009. Subsequently, this strategy was updated for the 2009-2013 interval and contains eco-innovation as horizontal theme. This theme is strongly connected to sustainable development in general and promotion of RES in particular.

RDA West takes part in the “Forwarding Regional Environmental Hierarchies” (FRESH) project financed through the INTERREG IVC Programme. The strategic objective of the project is to promote an economic development model based on sustainable structures for the creation of value added.

At national level, a National Council for Rural Development shall be established, as national partnership structure and decision maker on the drafting and implementation of the regional development policy. According to the law, the president of such council is the leader of the national institution in charge of the regional development (at present, the Ministry of Rural Development and Tourism). The National Council includes the presidents and vice-presidents of RDC and proportionally with their number, representatives of the Government including the president.

- The promotion of use of biofuels and other renewable fuels for transport constituted the subject of GD 1844/2005 supplemented by GD 456/2007. the Decision stipulates that, for the promotion of the use of biofuels and other renewable fuels in order to replace petrol and diesel fuel, the quantity of biofuels and other renewable fuels shall be of:

- minimum 2%, calculated based on the energy content of all types of petrol and diesel fuel used for transport, and introduced on the market by the Romania's accession date to the European Union;

- minimum 5.75%, calculated based on the energy content of all types of petrol and diesel fuel used for transport, and introduced on the market by 31 December 2010.

For the achievement of the second objective, economic operators shall introduce on the market only mixtures of biofuels and conventional fuels – derivatives of mineral oils, as follows:

- starting with 1 July 2007, diesel fuel with a biofuel content of minimum 2% in volume;
- starting with 1 January 2008 diesel fuel with a biofuel content of minimum 3% in volume;
- starting with 1 July 2008 diesel fuel with a biofuel content of minimum 4% in volume;
- starting with 1 July 2009 petrol with a biofuel content of minimum 3% in volume.

The set objectives shall be achieved by using biofuels, particularly (but not exclusively) for public transport.

MECBE is the authority in charge with:

- monitoring the effect of using biofuels in combination with diesel fuel with a share of over 5% by non-adapted auto vehicles;
- informing competent authorities in order to ensure compliance with environmental legislation on emission standards.

MECBE shall inform the public on the advantages of using biofuels and other renewable fuels.

For shares of biofuels mixed in derivatives of mineral oils exceeding the limit value of 5% for methyl esters of fatty acids or 5% for bioethanol, a specific labelling shall apply within marketing points.

At present, MECBE has initiated a GD project stipulating that the entire quantity of petrol and diesel fuel placed on the market starting with 1 January 2011 shall contain minimum 5% of biofuel in volume (comparing to the share of 4% that they currently represent). The document establishes a calendar for increasing the biofuels share for 2020.

- Starting with 1 January 2007 Romania became a EU member. In the same year, the Energy Strategy in Romania for the period 2007-2020 was drafted and approved by the government by GD 1069/2007.

The general objective of the energy sector strategy is to provide the necessary energy both at present and on a medium and long term at the lowest price possible and adapted to a modern market economy and a civilised life standard, under appropriate quality and supply safety conditions and in compliance with sustainable development principles.

Strategic objectives contained in the Strategy are the following:

Energy safety

- increase of energy safety by providing the necessary energy resources and limiting the dependence of imported energy resources;
- diversification of imported resources, energy resources and their transport routes;
- increase of the adequacy level of electricity, natural gas and petroleum national transmission grids;
- protection of the critical infrastructure.

Sustainable development

- promotion of energy production from renewable sources so that the share of electricity produced from such sources out of the total electricity gross consumption to be of 33% in 2010, 35% in 2015 and 38% in 2020. Out of the gross domestic energy consumption, 11% shall be supplied from renewable sources in 2010;
- stimulation of investments in improvement of energy efficiency throughout the entire resources-production-transmission-distribution-consumption chain;
- promotion of use of liquid biofuels, biogas and geothermal energy;
- support of research-development activities and dissemination of results of researches applicable to energy;
- reduction of the negative impact of the energy sector on the environment by using clean technologies;
- promotion of the production of electricity and thermal energy in high efficiency CHP facilities, particularly in efficiency CHPs;
- rational and efficient use of primary energy resources.

Competitiveness

- development of competitive markets of electricity, natural gas, petroleum, uranium, green certificates, greenhouse gas emission certificates and energy services;
- liberalization of energy transit and provision of permanent and non-discriminatory access of market members to transmission, distribution and international interconnection grids;
- increase of electricity interconnection capacity from approximately 10%, at present, to 15-20% in the perspective of 2020;
- continuation of the restructuring and privatisation process in electricity, thermal energy and natural gas sectors;
- continuation of the restructuring process in the lignite sector in order to increase profitability and access on the capital market.

The use of RES has an important role in this strategy.

The strategy shows that, except for large hydro electrical facilities, the costs associated to the production of electricity within plants that use renewable sources are currently superior to those using fossil fuels. The stimulation for the use of such sources and the call for investments in energy facilities using renewable sources shall take place by applying support mechanisms in accordance with European practice.

It is necessary to draw up studies on the impact of wind turbines on birds migration in Dobrogea and to define a clear and single map of areas where the construction of wind and hydro energetic facilities is not appropriate on environmental grounds.

The use of renewable energy sources has a significant impact on the national power system, being necessary:

- the drafting of different scenario studies on the impact resulting from taking over the electricity produced using wind and micro hydro turbines and by cogeneration using biomass in the transmission and distribution electric grid (voltages of or exceeding 110 kV) within areas with a high potential;
- the development of the transmission and distribution grids in the *smart grid* concept;
- the construction of new electricity production facilities with high flexibility in terms of operation and development of capacity market in order to counter

balance and/or reduce negative effects of uncontrolled variability of wind and micro hydro energy.

The Strategy presents a forecast of the production and final gross consumption of electricity, the main information being presented in Table 1.5.

Table 1.5. Forecast of electricity production

	TWh							
	2005	2008	2009	2010	2011	2012	2015	2020
Electricity total production	59.41	65.5	67.7	70.6	72.2	74.5	89.5	100
Gross domestic electricity consumption	56.48	62.5	64.2	66.1	67.7	69.5	74.5	85
E-RES production	20.21	18	19.5	21.7	22.3	23	26	32.5
Electricity production in nuclear power plant	5.54	10.8	10.8	10.8	10.8	10.8	21.6	21.6
Electricity production in power plants	33.66	36.7	37.4	38.1	39.1	40.7	41.9	45.9
E-RES share in total gross consumption %)	35.8	28.8	30.4	32.8	32.9	33.1	34.9	38.2

The Strategy establishes several general measures in order to achieve the priority objectives (including those relating to the use of RES) among which:

- improvement of the institutional and legal framework, under transparency conditions, in compliance with requirements related to competitiveness guarantee, environmental protection and energy supply safety as well as requirements relating to call and support of investments within energy sector and use of coal resources;
- improvement of the price policy for fuels, thermal energy and electricity taking into account the non-discrimination, transparency and objectivity principles as well as the gradual introduction and improvement of competitive mechanisms;
- guarantee of an appropriate training level of the personnel in accordance with current technical-economic requirements;
- technological development of the energy sector by stimulating and supporting research and innovation;
- development of foreign and domestic capital;
- development of electricity and gas competitive markets based on transparency principles and their integration on regional markets and subsequently on the European single market.

The measures considered for the promotion of renewable energy sources are:

- the increase of use level, under economic efficiency conditions, of renewable energy sources for the production of electricity and thermal energy by granting facilities during the investment stage, including facilitating access to the electric grid;
- development of the green certificates market and improvement of the aid scheme in order to develop private capital in renewable sources investments (to this effect Law 220/2008 and the amendments approved in 2010 were promoted);
- promotion of certain support mechanisms of renewable energy resources for the production of thermal energy and domestic hot water;
- use of structural funds.

According to the document analysed, the most convenient renewable resources (depending on use related costs and the resources volume) and technologies used for the production of electricity are hydro-electric power plants, including micro hydro

power plants, wind turbines and CHPs using biomass, while for the production of thermal energy, biomass and solar energy are the most convenient.

A separate chapter of the Strategy is dedicated to rural power engineering, the issue related to the use of RES being described in detail.

In rural areas, there is a diversity of forms of renewable energy that can be used for energy supply of such areas or urban areas:

- Biomass is the main rural fuel which is particularly used for heating spaces and water as well as for cooking; biomass covers approximately 7% of the quantity of primary energy required and approximately 50% of the renewable resources potential in Romania;
- Geothermal energy may be used for heating spaces and water; due to placement, the main potential of use is located in rural areas – dwellings, greenhouses, aquaculture, milk pasteurization – within facilities located at distances of maximum 35 km from the extraction location;
- Solar energy may be particularly used for preparing domestic hot water resulting in the reduction of fossil fuel consumption for water heating;
- Micro hydro power plants may represent a basic option for the supply of rural areas which are not connected to the electricity grid;
- Wind generators may also cover the necessary quantity of electricity within non-electrified rural areas that are difficult to access.

As regards the promotion of use of biofuels, the related set targets are the following:

- by the end of 2010, the percentage of use of biofuels of the total energy content of fuels used for transport shall be of minimum 5.75%;
- by the end of 2020, the percentage of use of biofuels shall be of minimum 10%, provided that the new generations of biofuels are used.

Considering the fuel quantity used each year, it results that a quantity of approximately 300,000 tonnes of biodiesel and bioethanol is necessary for 2010. Romania has sufficient potential to supply raw material both for biodiesel and for bioethanol so as the set targets to be achieved. For example, the Romanian potential to supply the necessary raw material for biodiesel, namely vegetal oil (sunflower, soya, rape) is of approximately 500 – 550 thousand tons per year. Thus, the requirements of achieving the target of 10% biofuel for 2020 are met, this target being calculated based on the energy content of all types of petrol and diesel fuel used for transport, namely the achievement of the target contained in the legislative package “Climate changes – renewable energies” approved by the European Parliament in December 2008.

A number of actions have been initiated in order to contribute to the promotion of use of biofuels and other renewable fuels. Within this context, it shall be mentioned the introduction in the provisions of the Fiscal Code of the excise exempt for energy products such as biofuels and other renewable fuels.

The Strategy establishes several measures for the achievement of objectives on the use of RES:

§ **Electricity**

- Continuing the development of the Danube on the “Portile de Fier II - Brăila” sector
Reanalysis of the opportunity to develop the C•l•rasi—Silistra area, in terms of hydro electricity, in partnership with Bulgaria and the establishment of CHE M•cin.
- The hydro electric power plant on Tisa river

This investment project shall be developed in partnership with Ukraine.

- The Islaz hydro electric power plant
The initiation of execution works for CHE Islaz, a vital link for providing reversible operating conditions for aggregates within the hydro energy system on the lower reaches of the Olt river, with an installed power of approximately 250 MW, in pumping mode.
- Hydro electric power plants, the construction of which was stopped in 90s
Clarification of the policy regarding the 22 incomplete hydroelectric power plants, based on the feasibility study.
- Creation of legislative incentives for stimulating investments in eligible renewable sources:
 - ◆ incentives during the investment stage – facilities granted by the Law on investments;
 - ◆ incentives during the operational stage – the green certificate system for electricity;
 - ◆ guaranteeing the minimum price for the Green Certificate over a reasonable duration, so that the investment may be recovered;
 - ◆ facilities granted for the connection to the system of producers of energy from renewable sources.
- Monitoring by MECBE of the quota for the use of renewable energy sources and the correction of the legislative framework in case it does not prove to be sufficiently attractive (for example, by amending the price ceiling for green certificates).

§ **Thermal energy**

- Drafting of regulations on aid schemes for investments in CHP production facilities, in energy production using renewable resources as well as aid schemes for CHP energy production using renewable resources etc.
- Provision by law of facilities to encourage the public to purchase, install and use installations for the heating and the preparation of domestic hot water using renewable energy resources (solar panels, heat pumps, wind generators, geothermal sources etc.).
- Performance of training on the necessity to maintain fossil energy resources, reduction of energy consumption and use of renewable energy resources as major obligation with regard to future generations.
- Promotion of press campaigns as well as other means of providing information on the necessity to give the public the means to increase energy efficiency, to reduce energy consumption, to maintain fossil energy resources, to use renewable resources, to protect the environment and to prevent the danger generated by global warming.

• Within the same period the drafting action was initiated for the **National Strategy for sustainable development – Horizons 2013-2020-2030**. the Strategy was approved by GD 1460/2008 and aims at the achievement of the following strategic short, medium and long term objectives:

- **Horizon 2013:** Organic incorporation of sustainable development principles and practices into the range of public programmes and policies rolled out by Romania, in its capacity as an EU member state;
- **Horizon 2020:** Reaching the current average level of European Union countries as regards the main indicators of sustainable development;

- **Horizon 2030:** Romania will come close to achieving the average level for that year of EU member countries from the point of view of sustainable development indicators.

The Strategy is a comprehensive document which analyses all areas of economic and social life. Strategic objectives and guidelines in relation to energy sector sustainable development are presented below.

Horizon 2013. National objective: provision on short and medium term of the necessary energy and the establishment of requirements for the country energy safety on a long term according to modern market economy, under safety and competitiveness conditions; fulfilment of obligations undertaken based on the Kyoto Protocol on the reduction with 8% of greenhouse gas emissions; promotion and application of adjustment measures to climate change effects and compliance with sustainable development principles.

The main **strategic guidelines** on energy policy that Romania must initiate as a priority, in accordance with objectives and policies agreed upon at the level of the European Union are energy security, sustainable development and competitiveness.

In terms of sustainable development should be considered:

- Increase of energy share produced based on renewable resources to total consumption and electricity production;
- Rational and efficient use of renewable primary resources and the gradual decrease of their share in the final consumption; promotion of electric and thermal energy production in high efficiency CHPs;
- Support of research – development – innovation activities in the energy sector, insisting on the increase of energy and ambient efficiency level;
- Reduction of the negative impact of the energy sector on environment and compliance with obligations undertaken in order to reduce greenhouse gas emissions and atmospheric pollutants emissions;

Horizon 2020. National objective: Guarantee of the efficient operation and under safety conditions of the national energy system, reach of the current medium level of EU as regards energy intensity and efficiency; fulfilment of obligations undertaken by Romania within the legislative package “Climate changes – renewable energies” and at international level, following the adoption of a related new global agreement; promotion and application of certain adjustment measures to climate change effects and compliance with sustainable development principles.

Following a preliminary assessment, without having available sectoral studies and climate scenarios sufficiently detailed at the level of Romania, the following actions are proposed:

- Integration of adjustment to climate change effects upon the application and amendment of current and future legislation and policies;
- Revision of all national strategies and programmes in order to guarantee the inclusion of all aspects on adjustment to sectoral policies;
- Establishment of communication ways in order to implement adjustment measures at local level;
- Increase of the level of awareness on the adjustment to climate change effects.

Horizon 2030. General objective: Alignment to EU medium performances on energy indicators and climate change; fulfilment of engagements undertaken for greenhouse gas emission reduction in compliance with current international and Community agreements and implementation of adjustment measures to climate change effects.

Romania shall continue to effectively contribute, according to international and Community agreements in force, to the implementation of European Union common objectives on climate change, by reducing greenhouse gas emissions and implementation of adjustment measures to climate change effects.

The construction of power plants and hydro-technical facilities shall continue in order to process 15-20% of the hydro-energy potential but still not used.

The thermal rehabilitation of approximately 40% of the current fund of multi-storey buildings shall be continued as well as the development of passive building projects or with extremely low energy consumption (15-50 kWh per square meter per year).

- In the context of national policy analysis in terms of energy produced from RES, it shall be deemed as necessary the presentation of provisions contained in the governing programme of the current government, which explicitly refer to the energy sector and in particular to the use of RES. **The governing programme was approved by Parliament Decision No 39/2009.**

The strategic objective of this sector is to guarantee the energy security of the country, based on an efficient supply system with primary, production, transport, distribution and supply resources, in order to guarantee continuous supply of all consumers under price accessibility, availability and sustainability conditions, considering the evolution of environmental quality.

Among the action guidelines established for the achievement of this objective, we shall mention:

- Increase of the country energy security by increasing the electricity production share, based on a energy optimum mix made of: coal, natural gas, nuclear and hydro, in order to guarantee economic and stable operation, by increasing the share of nuclear energy sources and the production of energy from renewable sources;
- Consolidation of energy independence of Romania by encouraging the use of renewable resources;
- Promotion of investment projects in renewable energy (wind, solar, biomass, geothermal energy, including urban waste) and harmonization of the legal framework;
- Stimulation of research in order to create the necessary technologies to achieve the objectives estimated to be achieved by the "20/20/20" Programme;
- Completion of investments in hydro projects undergoing different execution stages, financed from its own funds as well as based on a public-private partnership;
- Increase of the local authorities role in solving new challenges in the energy sector by increasing energy services quality for public lightning, public transport, air conditioning and thermal energy supply as well as the promotion of renewable energy sources by keeping the public utility feature of the service provision activity;
- Performance of feasibility studies in order to identify the opportunity to build a new hydro power station on the Danube river and of a new nuclear power plant;

- Establishment of an interconnection of NES Romania with the one in Turkey by submarine cable.
- In order to implement provisions on energy efficiency and promotion of end consumers of RES, as well as the implementation in the Romanian legislation of the Directive 2006/32/EC, the Government adopted GO 22/2008 on energy efficiency and promotion of RES to end consumers. According to the ordinance, the promotion of RES to end consumers forms integral part of the national energy efficiency policy. All economic operators with an annual consumption of over 1 000 toe, as well as the local public administration authorities with a population of over 20 000 inhabitants shall be obliged to draft energy efficiency programmes including promotion actions for the use of RES to end consumers. Such programmes shall be transmitted to ARCE (currently ANRE). Among the ARCE's duties and responsibilities we may mention:
 - Monitoring energy programmes and the resulting energy economies;
 - Granting free advisory services for projects drafting and application;
 - Promoting the use of RES to consumers by actions complementary to the energy market regulation;
 - Drafting, including by co-financing from the state budget or by its own resources, studies on the foundation of energy efficiency national programmes and participation in projects declared as eligible within energy efficiency and renewable energy programmes initiated by international organizations.

The Ordinance provides that the Ministry of Development, Public Works and Dwelling technically coordinates the actions related to the increase of building energy performance by:

- drafting specific technical regulations;
- certification of energy auditors for buildings;
- monitoring technical performance of buildings and establishment of a specific databank.

Such actions shall implicitly refer to the promotion of RES in buildings.

Annex No 1 to the Directive contains an indicative list of eligible measures for the improvement of energy efficiency, by means of which "the production of energy using RES which allows the reduction of bought energy (for example, the use of solar energy for the production of domestic hot water and the hot water for heating and for heating spaces)".

Methodological rules for the application of GD 22/2008 were approved by GD 409/2008.

- Having regard to the fact that the necessity for the public sector to represent an example on promotion of energy efficiency, the Government has approved by GD 1661/2008, the national programme on the increase of energy efficiency and use of RES in the public sector for 2009-2010. This programme shall ensure financial support through non-refundable co-financing from the state budget for the following types of investment objectives:
 - Rehabilitation and modernisation of thermal energy centralised supply systems, including the change of the type of fuel for energy combustion installation (for example, the replacement with biomass);
 - Thermal rehabilitation of public buildings and use of local RES potential for the supply of electric and/or thermal energy;
 - Modernisation of indoor and outdoor public lightning.

ARCE was designated as the competent authority for the implementation of this programme.

- According to provisions of Law 329/2009 on the reorganisation of public authorities and institutions, the rationing of public expenditures, the support of the business environment and the compliance of framework agreements with the European Commission and the International Monetary Fund, the Romanian Agency for Energy Conservation (ARCE) within the Ministry of Economy was liquidated due to its merging by absorption with ANRE, its activity being reorganized within the Regulation Department for energy efficiency.

- The presented documents show that a gradual increase of the number and intensity of measures taken for the promotion of RES. Accordingly, an increase of the engagements undertaken by the government in this area, namely an increase of the established objectives. The substantial reduction of scepticism became possible and showed at national level in certain locations and on certain times on the opportunity and efficiency of intensifying measures in order to use RES in parallel with the increase of general trust of business environments and public opinion in these measures.

The analysis of results registered in practice until present show that certain inactivity was registered, which may considered normal. The evolution of renewable energy gross domestic consumption during the period 2000-2007 is presented in Table 1.6.

Table 1.6. Renewable energy gross domestic consumption

	MU	2000	2001	2002	2003	2004	2005	2006	2007
Biomass and waste	thousand toe	2763	2135	2351	2844	3134	3185	3185	3360
Biogas	thousand toe								1
Geothermal energy	thousand toe	7	5	17	18	13	18	18	20
Industrial waste	thousand toe	96	225	112	89	90	85	81	106
Solar	thousand toe	0	0	0	0	0	0	0	0
Hydro	GWh	14778	14923	16046	13259	16688	20282	18355	15966
	thousand toe	1270.7	1283.1	1379.7	1140.1	1434.9	1743.9	1578.2	1372.8
Out of which:									
under 1 MW	GWh	0	0	54	72	86	77	71	90
	thousand toe	0	0	4.6	6.2	7.4	6,6	6.1	7.7
between 1 and 10 MW	GWh	0	0	382	398	688	675	622	514
	thousand toe	0	0	32.8	34.2	59.2	58,0	53.5	44.2
over 10 MW	GWh	14778	14923	15610	12789	15914	19530	17662	15362
	thousand toe	1270.7	1283.1	1342.2	1099.7	1368.4	1679,3	1518.7	1320.9
Wind	GWh	0	0	0	0	0	0	1	3
	thousand toe	0	0	0	0	0	0	0.1	0.3
TOTAL	thousand toe	4136.7	3648.1	3859.7	4091.1	4671.9	5031,9	4862.3	4860.1

Source: EUROSTAT

Statistical data published by ANRE on the production of E-RES in 2008 (the last year for which such data was published until present) are presented in Table 1.7.

Table 1.7

Total production of E-RES	16,918 GWh	100%
out of which:		
Hydro over 10 MW	16,144	95.4%
Hydro between 1 and 10 MW	661	3.9%
Hydro under 1 MW	102	0.6%
Total hydro	16,907	99.9%
Wind	11 GWh	0.1%

Source: ANRE's website

It can be noticed the fact that at the level of 2008 E-RES was practically produced exclusively within hydro-electric power plants. The share of wind power stations was insignificant.

On the other hand, the last information available shows that the taken measures start to prove their efficiency even under economic crisis conditions. In Table 1.8, the evolution of E-RES producers licensed by ANRE and qualified for priority production of wind, solar and biomass energy.

Table 1.8

	January 2008	January 2009	January 2010
Wind energy			
Number of producers	8	12	15
Installed power (MW)	7.754	10.92	14.155
Solar energy			
Number of producers	0	0	1
Installed power (MW)	0	0	0,0088
Biomass			
Number of producers	0	0	1
Installed power (MW)	0	0	8.080

Source: ANRE website

The increase tendency of the number of producers and the installed power is already obvious and shall substantially accentuate in the future.

In the period 2008 – March 2010, TRANSELECTRICA concluded three contracts for the connection of wind power plants with a total power of 600 MW and issued 18 technical approvals for the connection to the electricity transmission system for wind power sets with a total power of 2823 MW. The construction-mounting works of such installations are under execution, their commissioning being estimated to take place in the relatively near future. The concluded connection contracts shall also be attached, namely the technical approvals for connections granted by major OD at national level. A synthetic situation is presented in Table 1.9, the data being available for the beginning of April 2010.

Table 1.9. Connection agreements and technical approvals for wind power plants concluded/granted for 2008-2010

Grid operator	Connection contracts		Connection technical approvals	
	Number of producers	Installed power (MW)	Number of producers	Installed power (MW)
TRANSELECTRICA	3	600	18	2823
Enel Dobrogea	58	1538.56	19	522
FDEE Electrica Distributie Muntenia Nord	30	376.03	14	430.9
E.ON Moldova	7	16.69	8	300.6
Enel Banat	3	89	2	160
CEZ	1	1.8		
TOTAL	102	2622.08	61	4236.5

Source: *TRANSELECTRICA's website*

The possibility to access European structural funds has considerably motivated the development of large projects aiming at the use of RES. The introduction of incentives for the development of projects of producing heat from RES (including small scale projects) shall substantially contribute to the accomplishment of set strategy objectives.

In the future, significant efforts shall be made in order to use biomass (including firewood) with superior efficiency and also to use other available renewable sources (wind energy and not only).

The considerations presented determined Romania to consider, in the forecast document drafted and submitted in December 2009, that it will be able to achieve the set global objective in due time without being necessary to request the transfer from other Member States.

2. EXPECTED FINAL ENERGY CONSUMPTION 2010-2020

The performance of forecasts on the evolution of energy consumption represent a current activity that contributes to the foundation of the main energy policy decisions adopted in Romania. The results allow the initiation and application of optimum measures for the energy supply of consumers (under safety conditions, at minimum prices, in compliance with environmental protection requirements etc).

The main role in the performance of macroeconomic and energy forecasts on medium and long term is held by the National Forecasting Commission – (CNP) (public institution comprised in the Government structure). CNP updates each semester the “Projection of main macroeconomic indicators on a short (5 years) and long (10 years) period” and annually in the “Forecast of energy balance on a long term (10 years)”. Based on the CNP forecast, specialised institutes perform their own forecasts by emphasising production and primary and final energy consumption per economic sectors and energy forms and other specific aspects.

The global economic crisis that started in 2008 is strongly affecting Romania, including in terms of energy consumption while medium and long term influences are difficult to evaluate. Thus, the forecasts performed in 2007 estimated a value of the Romanian gross domestic product in 2020 of over 185 billion Euro 2005 (186 billion Euro 2005 in the Energy Strategy of Romania for the period 2007-2020, 185.1 billion Euro 2005 in the forecast performed using the PRIMES model of the Technical University of Athens). The forecast performed by CNP at the beginning of 2010 estimates a GDP value in 2020 of 144.0 billion Euro 2005, namely 77.4% comparing to 2007 forecasts. This reduction of the economic development level caused by the economic crisis directly and substantially influences current energy forecast values for 2020 in comparison with values forecasted in 2007. A comparison between the values forecasted in 2007 and those forecasted in 2010 for GDP, the final energy consumption and the primary energy consumption is presented in Table 2.1 .

Table 2.1

GDP	MU	2010	2015	2020
2007 PRIMES forecast	billion Euro 2005	104.9	141.1	185.1
2007 Energy Strategy 2007-2020 forecast	billion Euro 2005	108.3	142.2	186
2010 CNP forecast	billion Euro 2005	90.54	111.7	144
Final energy consumption				
2007 PRIMES forecast	thousand toe	28044	32019	35906
2007 Energy Strategy 2007-2020 forecast	thousand toe	27075	29862	31620
2010 CNP forecast	thousand toe	23580	25885	27240
Primary energy consumption				
2007 PRIMES forecast	thousand toe	41890	46946	52991
2007 Energy Strategy 2007-2020 forecast	thousand toe	40071	45504	48360
2010 CNP forecast	thousand toe	35610	38765	40500

It shall be mentioned that:

- Energy forecasts performed in 2007 (both the forecast performed using the PRIMES model and the forecast of the Energy Strategy in Romania for the period 2007-2020) took place within the same scenario of macroeconomic development which was infirmed by the subsequent economic evolutions;
- The CNP forecast of 2010 was performed considering a macroeconomic development scenario that considers the influences of current economic crisis as well as measures to increase energy efficiency.

The values shown in this table emphasise the following:

- Domestic forecasts performed in 2007 (and synthesised in the Energy Strategy of Romania for the period 2007-2020) are comparable with forecasts performed using the PRIMES model in the same year;
- The current economic crisis has a strong influence on the general evolution of Romania until 2020, including in terms of energy consumption.

Current forecasts on demographic evolution and main macroeconomic indicators during the period 2010-2020 that established performed energy forecasts are presented in Tables 2.2 and 2.3.

Using basic information contained in CNP forecasts, a team of specialists from main Romanian specialized institutes performed the forecast on final gross consumption for the period 2010-2020 in accordance with provisions of Directive 2009/28/EC.

The forecast was performed using the Model for Analysis of Energy Demand (MAED), largely used at international level.

According to indications of Chapter 2 of Commission Decision 2009/548/EC, two scenarios were drafted and separated by measures taken for energy efficiency and saving adopted during the period following 2009, namely:

- **“the reference scenario”** which considers for the period 2010-2020, only the energy efficiency and saving measures adopted by 2009;
- **“scenario with high energy efficiency”** which considers all energy efficiency and saving measures estimated to be adopted starting with 2010 and the effect of their application.

The two scenarios on the energy consumption consider the same economic evolution scenario (presented in Table 2.2).

The long term forecast (2010-2020) on final gross energy consumption (as defined in Article 2(f) of Directive 2009/28/EC) for all types of energy (both renewable and conventional), globally and per each area, is presented in Table 2.4. This table corresponds to Table 1 of the Commission Decision 2009/548/EC.

The forecasts were drafted in compliance with definitions, calculation rules and terminology established by Directive 2009/28/EC and Regulation (EC) No 1099/2008 of the European Parliament and the Council on energy statistics.

The share of the final energy consumption forecasted for aviation during 2010-2020 (~0.5%) is in Romanian much lower than the limit level of 6.18% out of the final gross energy consumption imposed by the Directive, so that the adjustments of the final energy consumption for transmission was not necessary.

Table 2.2 Macroeconomic evolution forecast

Source: CNP

	Unit	2005	2010	2011	2012	2013	2014
GDP	billion Euro 2005	79,532	90,535	92,710	96,140	100,370	105,600
Rate of growth in GDP	[%]		0.5	2.4	3.7	4.4	5.2

	Unit	2015	2016	2017	2018	2019	2020
GDP	Billion Euro 2005	111.700	117.700	124.300	130.810	137.220	144.000
Rate of growth in GDP	[%]	6.0	5.7	5.3	4.9	4.8	5.0

Table 2.3. Expected gross final energy consumption of Romania in heating and cooling, electricity and transmission up to 2020 taking into account the effects of energy efficiency and energy saving measures of 2010-2020 (ktoe)

Note: Table 2.3. corresponds to Table 1 of Commission Decision 2009/548/EC

	2005	2010		2011		2012		2013		2014	
	Base year	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency
1. Heating and cooling	18779	16056	15788	16106	16184	16643	16525	17303	16840	18093	17210
2. Electricity	4601	5350	5350	5710	5383	5864	5432	5994	5527	6066	5568
3. Transmission, according to Article 3(4)(a)	4139	4856	4725	5112	4873	5259	4999	5408	5125	5556	5252
4. Gross final energy consumption	27519	26261	25863	26928	26439	27766	26956	28705	27493	29716	28030

	2015		2016		2017		2018		2019		2020	
	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency	Reference scenario	Additional energy efficiency
1. Heating and cooling	18943	17572	19179	17708	19460	17818	19790	17973	20164	18140	20696	18316
2. Electricity	6189	5655	6445	5790	6741	5975	6980	6098	7211	6216	7439	6334
3. Transmission, according to Article 3(4)(a)	5707	5379	5814	5434	5921	5485	6027	5536	6134	5592	6239	5628
4. Gross final energy consumption	30838	28606	31438	28932	32122	29278	32797	29607	33508	29949	34374	30278

3. RENEWABLE ENERGY TARGETS AND TRAJECTORIES

3.1. National overall target

Table 3.1 National overall target for the share of energy from renewable sources in gross final consumption of energy in 2005 and 2020 (figures to be transcribed from Annex I, Part A to Directive 2009/28/EC)

Note: Tables 3.1 corresponds to Table 2 of Commission Decision 2009/548/EC.

A. Share of energy from renewable sources in gross final consumption of energy in 2005 (S2005) (%)	17.8
B. Target of energy from renewable sources in gross final consumption of energy in 2020 (S2020) (%)	24
C. Expected total adjusted energy consumption in 2020 (from Table 1, last cell) (ktoe)	30278
D. Expected amount of energy from renewable sources corresponding to the 2020 target (calculated as B x C) (ktoe)	7267

The energy potential of RES in Romania was presented in Chapter 1, Table 1.2 and is estimated at 14718 ktoe. This potential does not take into account the economic, environmental and market restrictions. In order to reach the target established by Directive 2009/28/EC for 2020, Romania shall use 50% of the value of this potential which will imply a consistent investment effort. According to the aspects mentioned in the provision document, Romania considers that it will be able to meet the limit of the set global objective without being necessary to request the transfer from other Member States but also without the possibility to perform statistic transfer to other Member States.

3.2. Sectoral targets and trajectories

According to Article 4(1) of Directive 2009/28/EC, Member States are required to set their targets for the share of energy from renewable sources in 2020 in the following sectors:

- *heating and cooling;*
- *electricity;*
- *transport.*
- In order to determine such sectoral objectives, have been used:
 - Forecasts on the energy consumption in the perspective of 2020; forecasts were performed using the MAED model; the synthesis of such forecasts is presented in Chapter 2, Table 2.3;
 - The analyses and forecasts on the development possibilities of energy production from RES in the decade 2010-2020.
- Main data on the forecast in relation to the electric energy production from RES and its share in the electricity final gross consumption are presented in Table 3.2. Details on the table values determination are presented in Table 5.1.

Table 3.2

Calculation table for the E-RES share in the electricity gross domestic consumption

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Electricity final gross domestic consumption (the scenarion additional energy efficiency) (ktoe)	4601	5350	5383	5432	5527	5568	5655	5790	5975	6098	6216	6334
2. E-RES consumption (ktoe)	1384	1470	1660	1838	2026	2229	2367	2481	2544	2599	2654	2699
3. E-RES share (%)	30.08	27.48	30.83	33.84	36.66	40.04	41.86	42.84	42.57	42.63	42.70	42.62

The E-RES consumption in ktoe shall be practically equal to the consumption forecasted in the Energy Strategy of Romania for the period 2007-2020. The aid schemes applied bring a significant contribution to the reduction up to elimination of the current economic crisis impact on production, namely the consumption of E-RES in Romania. However, this crisis is considerably influencing the electricity final gross consumption. Under such circumstances, it is foreseen that in 2020, the E-RES share in the final gross consumption shall be of approximately 42.6% instead of 38%, this value being established as percentage target in the Energy Strategy of Romania for the period 2007-2020.

- Main information on the forecast regarding the energy consumption for transport is presented in Table 3.3.

Table 3.3

Note: Table 3.3 contains the information requested in Table 4b of Commission Decision 2009/548/EC, as follows:

- line C of Table 4b corresponds to line 2 of Table 3.3
- line H of Table 4b corresponds to line 2.1 Table 3.3
- line I of Table 4b corresponds to line 2.3 Table 3.3
- line J of Table 4b corresponds to line 3 Table 3.3

Calculation table for the renewable energy sources share in transport

	M.U.	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Final energy consumption in transport – additional energy efficiency scenario (excluding the aviation), out of which:	thousand toe	4139	4725	4873	4999	5125	5252	5379	5434	5485	5536	5592	5628
1.1 electricity, out of which:	thousand toe	136	126	127	124	122	120	120	120	120	121	122	123
1.1.1 road transport	thousand toe	37	35	36	36	35	34	34	33	33	33	33	33
1.2 fuels	thousand toe	4003	4599	4746	4875	5003	5132	5259	5314	5365	5415	5470	5505
2. Expected renewable energy sources consumption in transport, out of which:	thousand toe	40.9	260	293.2	326.3	355.1	384.5	414.4	437.1	461.9	489.9	520.8	542.7
2.1. expected E-RES in road transport	thousand toe	11.1	10.0	11.4	12.6	13.3	13.9	14.5	14.1	14.0	14.1	14.2	14.4
2.2. regular biofuels	thousand toe	0	223.8	253.1	283	308.9	335.4	363.3	385.7	410.9	438.1	468.2	489.2
2.3 Expected consumption of biofuels from wastes, residues, non-food cellulosic and lingo-cellulosic material	thousand toe	0	0	0	0	0	0	0	0	0	0	0	0
3. The expected E-RES contribution to transport (Line 2+(2,5-1*Line 2.1+(2-1*Line 2.3))	thousand toe	57.6	275.0	310.3	345.1	375.0	405.3	436.1	458.2	482.9	511.1	542.1	564.2
4. RES share to total transport (Line3/ Line 1*100)	%	0.0	5.8	6.4	6.9	7.3	7.7	8.1	8.4	8.8	9.2	9.7	10.0

- Main information on the forecast regarding the energy consumption for heating and cooling is presented in Table 3.4

Table 3.4.

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Final energy consumption for heating and cooling	18779	15788	16184	16525	16840	17210	17572	17708	17818	17973	18140	18316
Energy from RES for heating and cooling	3516	2819	2834	3000	2969	2925	3000	3058	3220	3390	3707	4038
RES share to the total consumption for heating and cooling	18.72%	17.86%	17.51%	18.15%	17.63%	17.00%	17.07%	17.27%	18.07%	18.86%	20.44%	22.05%

- Sectoral objectives on energy from renewable sources for electric energy, heating and cooling as well as sectoral trajectories are presented in Table 3.5, which corresponds to Table 3 of the Commission Decision 2009/548/EC

Table 3.5. National 2020 target and estimated trajectory of energy from renewable sources in heating and cooling, electricity and transport

Note: Table 3.5 corresponds to Table 3 of Commission Decision 2009/548/EC

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
RES - H&C (1) (%)	18.72	17.86	17.51	18.15	17.63	17.00	17.07	17.27	18.07	18.86	20.44	22.05
RES - E (2) (%)	30.08	27.48	30.83	33.84	36.66	40.04	41.86	42.84	42.57	42.63	42.70	42.62
RES - T (3) (%)	1.39	5.82	6.37	6.90	7.32	7.72	8.11	8.43	8.80	9.23	9.69	10.00
Overall RES share (4) (%)	17.90	17.50	18.00	19.04	19.35	19.66	20.13	20.59	21.21	21.83	22.92	24.00
Of which from cooperation mechanism (5) (%)	0	0	0	0	0	0	0	0	0	0	0	0

Surplus for cooperation mechanism (5) (%)	0	0	0	0	0	0	0	0	0	0	0	0
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- (1) Share of renewable energy in heating and cooling:
- gross final consumption of energy from renewable sources for heating and cooling (row A of Table 3.7), divided by
- gross final consumption of energy for heating and cooling (row 1 of Table 2.3).
- (2) Share of renewable energy in electricity:
- gross final consumption of electricity from renewable sources for electricity, divided by
- total gross final consumption of electricity.
- (3) Share of renewable energy in transport:
- final energy from renewable sources consumed in transport, divided by
- consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 2.3).
- (4) Share of renewable energy in gross final energy consumption.
- Table 3.6 was drafted in accordance with Annex 1 Part B of Directive 2009/28/EC. We shall mention that this table, unnumbered, is presented in Commission Decision 2009/548/EC continuing Table 3.

Table 3.6

	2011-2012	2013-2014	2015-2016	2017-2018	2020
According to Annex I Part B of the Directive	S + 20 % (S2020-S2005)	S + 30 % (S2020-S2005)	S + 45 % (S2020-S2005)	S + 65 % (S2020-S2005)	S2020
RES minimum trajectory (%)	19.0	19.7	20.6	21.8	24.0
RES minimum trajectory (ktoe)	5132	5511	5957	6463	7267

- The Decision recommends the use by the Member States of calculation tables 4.a and 4.b in order to draft Table 3 (the numberings being the ones in the Decision). To this effect, Tables 3.7 (corresponding to Table 4a) and 3.8 (corresponding to Table 4b) were drafted.

Table 3.7. Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)

	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
A. Expected gross final consumption of RES for heating and cooling	3516	2819	2834	3000	2969	2925	3000	3058	3220	3390	3707	4038
B. Expected gross final consumption of electricity from renewable energy sources (excluding electricity in transport, value considered at line C)	1347	1435	1624	1802	1991	2195	2333	2448	2511	2566	2621	2666
C. Expected final consumption of energy from RES in transport	58	275	310	345	375	405	436	458	483	511	542	564
D. Expected total RES consumption	4921	4529	4768	5147	5335	5525	5769	5964	6214	6467	6870	7268
E. Expected transfer of RES to other Member States	0	0	0	0	0	0	0	0	0	0	0	0
F. Expected transfer of RES from other Member States and 3rd countries	0	0	0	0	0	0	0	0	0	0	0	0
G. Expected RES consumption adjusted for target $(D) - (E) + (F)$	4921	4529	4768	5147	5335	5525	5769	5964	6214	6467	6870	7268

Note: Table 3.7 corresponds to Table 4a of Commission Decision 2009/548/EC

4. MEASURES FOR ACHIEVING THE TARGETS

4.1. Overview of all policies and measures to promote the use of energy from renewable resources

Table 4.1

Note: Table 4.1 corresponds to Table 5 of the Commission Decision 2009/548/EC

Name and reference of the measure	Type of measure (*)	Expected result (**)	Targeted group and or activity (***)	Existing or planned	Start and end dates of the measure
1. Drawing up and approval of the RES Valuation Strategy (Government Decision 1535/2003)	Not normative	Increase by 2015 of energy production from RES up to 23.37 TWh electricity and 3527.7 thousand tep thermal energy	Production of energy from RES at national level	Existing	Start date: 2003 End date: 2015
2. Drawing up and approval of the Energy Strategy of Romania for the 2007-2020 period (Government Decision 1069/2007)	Not normative	Increase by 2020 of the E-RES production to 38% of consumption (32.5 TWh)	Production of energy from RES at national level	Existing	Start date: 2007 End date: 2020
3. Carrying out Joint Implementation type projects (according to the Kyoto Protocol)	Financial	Reduction of CO ₂ emissions by increasing the energy production from RES	Government authorities from partner states and investors	Existing	Start date: 2000 End date: not specified
4. Implementation of the mandatory shares system combined with GC trading for E-RES	Regulation	Increase by 2020 of the E-RES production for which a GC is granted to 20% of the internal consumption, also cumulated with the effect of other measures promoting E-RES	Production of electricity in hydro-electric power stations of maximum 10 MW, wind farms, solar plants	Existing	Start date: 2005 End date: after 2020
5. Organisation and operation of the competition GC exchange within OPCOM	Regulation	Increase by 2020 of the E-RES production for which a GC is granted to 16.8% of the internal consumption (1033 thousand tep), also cumulated with the effect of other measures promoting E-RES	Production of electricity in hydro-electric power stations of maximum 10 MW, wind farms, solar plants	Existing	Start date: 2005 End date: not specified
6. Issuance of origin guarantees for electricity produced from RES	Information campaign	Increase by 2020 of the E-RES production up to 38% of the internal consumption (2337 thousand tep), also cumulated with the effect of other	E-RES production	Existing	Start date: 2004 End date: not specified

Name and reference of the measure	Type of measure (*)	Expected result (**)	Targeted group and or activity (***)	Existing or planned	Start and end dates of the measure
		measures promoting E-RES			
7. Use of biofuels and other renewable fuels in combination with conventional fuels.	Regulation	Increase by 2020 of the biofuels share in the total consumption of fuels up to 9.18% (472 thousand tep)	Production of biofuels	Existing	Start date: 2007 End date: not specified
8. Regional state aid scheme on RES valuation	Financial	E-RES production: 800 GWh Thermal energy production from RES : 200 GWh	Investors	Existing	Start date: 2008 End date: 2013
9. Co-financing scheme without applying the state aid rules	Financial	E-RES production: 1 GWh Thermal energy production from RES : 200 GWh	Local public administration	Existing	Start date: 2008 End date: 2013
10. National programme for the increase of energy efficiency and RES use in the public sector for 2009-2010	Financial	-	Local public administration	Existing	Start date: 2009 End date: 2010
11. Programme on the production of energy from RES: wind power, geothermal and solar energy, biomass and hydro-energy.	Financial	-	Investors	Existing	Start date: 2009 End date: not specified
12. State aid scheme "Regional development stimulation by making investments for the processing of agricultural and forestry products with a view to obtaining non-agricultural products."	Financial	Increase of the biofuels production	Investors	Existing	Start date: 23.12.2009 End date: 31.12.2013

4.2. Specific measures to fulfil the requirements under Articles 13, 14, 16 and Articles 17 to 21 of Directive 2009/28/EC

4.2.1. Administrative procedures and spatial planning

(a) List of existing national and, if applicable, regional legislation concerning authorisation, certification, licensing procedures and spatial planning applied to plants and associated transmission and distribution grid infrastructure:

a.1 Legislation on urban planning, constructions, spatial planning

- LAW 50 of 29 July 1991 *Republished on authorising the execution of constructions and certain measures for the execution of residential buildings;
- Order No 839/2009 approving the measures to be taken for the implementation of Law No 50/1991 on authorising the execution of construction works;
- LAW 350/2001 on spatial and urban planning, as subsequently amended and supplemented;
- Government Ordinance 69/2004 supplementing Art. 38 of Law 350/2001 on spatial and urban planning;
- Government Ordinance 932 / 2007 approving the methodology on financing from the state budget of natural risk maps for earthquakes and landslides;
- Government Decision 525/1996 republished approving the General Urban Planning Regulation.

a.2 Legislation on the environment and impact on environment

Primary legislation

- Government Emergency Ordinance 195/2005 on environmental protection approved as amended by Law 265/2006 as subsequently amended and supplemented;
- Government Emergency Ordinance 152/2005 on integrated pollution prevention and control approved as amended by Law 84/2006; this law transposes Directive 96/61/EC on integrated pollution prevention and control (IPPC);
- Government Decision 1076/2004 establishing the procedure for carrying out the environmental assessment for plans and programmes; this law transposes Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment;
- Government Decision 445/2009 on the assessment of the effects of certain public and private projects on the environment; this law transposes Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, amended and supplemented by Council Directive 97/11/EC and Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC.

Secondary legislation

- MWEP Order 863/2002 approving the applicable methodological guides for the stages of the assessment framework procedure of the impact on environment;

- MWEF Order 864/2002 approving the Procedure on environmental impact assessment in a trans-boundary context;
- MEWM Order 818/2003 approving the Procedure of issuance of the integrated environmental permit, as subsequently amended and supplemented;
- MEWM Order 36/2004 approving the General technical guide for the implementation of the procedure of issuance of the integrated environmental permit;
- MESD Order 1798/2007 approving the Procedure of issuance of the environmental permit.

a.3. Legislation on energy

Primary legislation

- Electricity Law 13/2007 as subsequently amended and supplemented;
- Law 325/2006 on the public heating supply service;
- Law 220/2008 establishing the promotion system of the energy production from renewable sources of energy as subsequently amended and supplemented;
- Government Emergency Ordinance 44 of 16 April 2008 (*updated*) on the carrying out of economic activities by self-employed persons, individual companies and family businesses as subsequently amended and completed
- Government Decision 540/2004 approving the Regulation for granting licences and authorisation in the electricity field, as subsequently amended and supplemented;
- Government Decision 90/2008 approving the Regulation on the connection of users to public interest electricity grids.

Secondary legislation

- Technical norm on the demarcation of the protection and safety areas corresponding to energy capacities approved by ANRE Order 4/2007, as subsequently amended and supplemented;
- Technical norm "Technical conditions for the connection to public interest electricity grids for wind power plants" approved by ANRE Order 51/2009.

a.4. Legislation on the protection of the cultural and archaeological patrimony

Primary legislation

- Government Ordinance 43/2000 on the protection of the archaeological patrimony and declaration of certain archaeological sites as areas of national interest.

Secondary legislation

- Order of the Minister of Culture and Cults 2518/2007 approving the Implementation methodology of the procedure for archaeological load discharge;
- Order of the Minister of Culture and Cults 2103/2007 approving the Methodology on the coordination of the archaeological research activity in the archaeological sites declared areas of national interest;
- Order of the Minister of Culture and Cults 2066/2007 approving the Methodology and the financing criteria for the archaeological sites financed from the budget of the Minister of Culture and Cults;

- Order of the Minister of Culture and Cults 2183/2007 approving the Methodology for the financial assessment of the damage caused to the national cultural real estate patrimony – historical monument or archaeological site;
- Order of the Minister of Culture and Cults 2666/2007 for the implementation of the models for stamps, applications for authorisation, authorisations, certificates, approvals and technical forms necessary for archaeological research.

a.5. Legislation on agricultural real estate

- Law on agricultural real estate 18/1991 as subsequently amended and supplemented;
- Joint Order of the Minister of Agriculture, Forests and Rural Development and of the Minister of Administration and Interior No 897/798/2005 approving the Regulation on the content of the documentation related to withdrawal of land from agricultural use.

a.6. Legislation on forestry real estate

Law No 46/2008 – Forestry Code

a.7. Legislation on aeronautical servitude areas

RACR – PMA – 1 and RACR – CADT aeronautical regulations on the approval of constructions and site planning in sites used for aviation purposes.

(b) Responsible Ministry(/ies)/authority(/ies) and their competences in the field:

- County Councils have the competence to issue building permits for electricity production units, installations for their connection to the electricity grids of public interest and for other relevant site planning (e.g. access roads);
- The Territorial Agencies within the National Environmental Protection Agency, which is the specialised institution of the central public administration subordinated to the Ministry of Environment and Forests; the territorial agencies are responsible for the implementation of the policies and legislation in the environmental protection field which include the competence to issue environmental agreements for the carrying out of projects of new electricity production units, and environmental permits by which their operation is allowed;
- The County and Bucharest Directorates for Agriculture and Rural Development issue the decisions on withdrawal of land from agricultural use.
- ANRE has competences in the energy field including the granting of:
 - Setting-up authorisations for:
 - the execution works of the electricity/electricity and heating production capacities in CHP or new production capacities within such units if the installed power of the unit and of the production capacities to be set up is higher than 1 MW;
 - the retrofitting works of the electricity/electricity and heating production capacities in CHP or of one or more production capacities within such unit if the installed power of that unit and of the production capacities to be retrofitted is higher than 1 MW;

- Licences for:
 - commercial operation of the production capacities of energy and thermal energy in CHP.
 - provision of electricity transmission service and system service;
 - provision of electricity distribution service.

(c) Revision foreseen with the view to take appropriate steps as described by Article 13(1) of Directive 2009/28/EC

At the beginning of June 2010, the Romanian Parliament voted the law amending and supplementing Law 220/2008 establishing the energy production promotion system from RES. At present, this is in the course of promulgation by the President of the Republic and shall enter into force following its publication in the Official Journal. The new law stipulates the carrying out of improvements on the administrative procedures, regulations and codes, as well as completion deadlines for such improvements depending on its entry into force.

The regulations to be drawn up/revised are the following:

- Calculation methodology of the purchase share of green certificates by providers depending on the purchase share of the fully established E-RES – completion deadline 3 months;
- Calculation methodology of the final gross consumption of electricity from renewable sources of energy – completion deadline 3 months;
- Qualification regulation for the producers of electricity from renewable energy sources for the application of the support scheme – completion deadline 2 months;
- Methodology for the monitoring of the support scheme through green certificates for the promotion of electricity from RES - completion deadline 3 months;
- Methodology for setting regulatory prices from E-RES produced in electricity plants with installed power under 1 MW, per type of technology - completion deadline 2 months;
- Regulation on the takeover of the electricity excess produced from renewable energy sources by natural persons holding electricity production capacities under 1 MW per consumption site, and by the public authorities holding electricity production capacities realised, either in part or in full, from structural funds - completion deadline 2 months;
- Methodology on the possibility of amending the notifications throughout the operation day by the producers of electricity from renewable sources - completion deadline 3 months;
- Regulation for the issuance and monitoring of origin guarantees for electricity from renewable resources - completion deadline 3 months.

(d) Summary of the existing and planned measures at regional/local levels (where relevant):

The measures for the coordination and simplification of the implementation rules of the procedures authorising the energy generators based on renewable energy sources are regulated in general terms in the Energy Development Strategy of Romania 2007-2020, in the National Development Plan and in Law 220/2008.

Lately, such measures materialised by carrying out feasibility studies for the Specific Programmes financed from structural funds and Environmental Funds.

Starting from the current situation, namely 112 wind farms with 2624MW power have connection contract with the grid operators and 85 wind farms, with total installed power of 5000MW, have grid connection authorisations (31 May 2010 – Transelectrica website), we can draw the conclusion that, at least for the applications using renewable energy sources connected to the medium and high voltage grids, there are no problems regarding the obtaining of all the necessary permits and approvals (over 100).

(e) Are there unnecessary obstacles or non-proportionate requirements detected related to authorisation, certification and licensing procedures applied to plants and associated transmission and distribution grid infrastructure for the production of electricity, heating or cooling from renewable sources, and to the process of transformation of biomass into biofuels or other energy products? If so, what are they?

Following the review of the authorisation and licensing procedures, their number was low due to the renunciation to the requirement on operation authorisations and commissioning permits for the **low power units**. Also, the set-up authorisations are granted for production capacities higher than 1 MW.

(f) What level of administration (local, regional and national) is responsible for authorising, certifying and licensing renewable energy installations and for spatial planning? (If it depends on the type of installation, please specify.) If more than one level is involved, how is coordination between the different levels managed? How will coordination between different responsible authorities be improved in the future?

The granting of the set-up and licensing authorisations for the installations based on energy from RES is carried out at national level by ANRE through its central division. The location of the E-RES installations/production capacities, in terms of spatial planning, is authorised according to the legislation in the field of constructions and environmental protection by the competent bodies at regional/local level. Coordination mechanisms are not provided for between such levels responsible for the authorisation.

(g) How is it ensured that comprehensive information on the processing of authorisation, certification and licensing applications and on assistance to applicants made available? What information and assistance is available to potential applicants for new renewable energy installations on their applications?

The necessary information is offered by means of ANRE's webpage and, upon the request of interested parties, ANRE personnel provides replies to the information enquiries, by phone, email or to official letters sent by fax. ANRE, through its personnel, ensures the guided phone access to the relevant documents by means of its webpage. Of the documents thus accessible, the following are mentioned:

- E-RES Producer's Guide – 2009;
- Regulation for granting licences and authorisations in the electricity sector approved by Government Decision 54/2004, as subsequently amended and supplemented;

- Documentation for granting the set-up authorisation;
- Annual GC market monitoring reports;
- Annual reports for the issuance of origin guarantees;
- **Primary and secondary legislation in the field.**

The holders of set-up authorisations and licences can be found on ANRE's webpage.

The TRANSELECTRICA website also contains useful information. The website has a distinct section on the wind farms integration in NES, which presents the TRANSELECTRICA strategy in this field as well as the technical connection permits issued and the connection contracts concluded. The "Piata de electricitate" (*Electricity Market*) presents the GC market, the technological system services and the capacity allocation market on the interconnection lines.

At local level, there is no special information system for the potential applicants for information on authorisation, certification and licensing.

Within public debates on NREAP, it was requested the set-up of information points in each county (for example at the site of the energy providers and the sites of the distribution operators) with complete information on the procedure for obtaining all the authorisations, certificates and licences necessary for a new producer of *energy* from renewable sources; such information must be approved by ANRE that should develop an interactive information system. This request is under examination **by the competent authorities**.

(h) How is horizontal coordination facilitated between different administrative bodies, responsible for the different parts of the permit? How many procedural steps are needed to receive the final authorisation/licence/permit? Is there a one-stop shop for coordinating all steps? Are timetables for processing applications communicated in advance? What is the average time for obtaining a decision for the application?

For a producer of electricity from renewable sources, the following documents are necessary for setting up the production capacity:

The documents issued by the authority of the county or local public administration, as applicable:

- **Urban planning certificate** – contains including specifications on all the approvals to be obtained;
- **Building permit.**

Documents issued by the electricity grid operator to which the installation is to be connected:

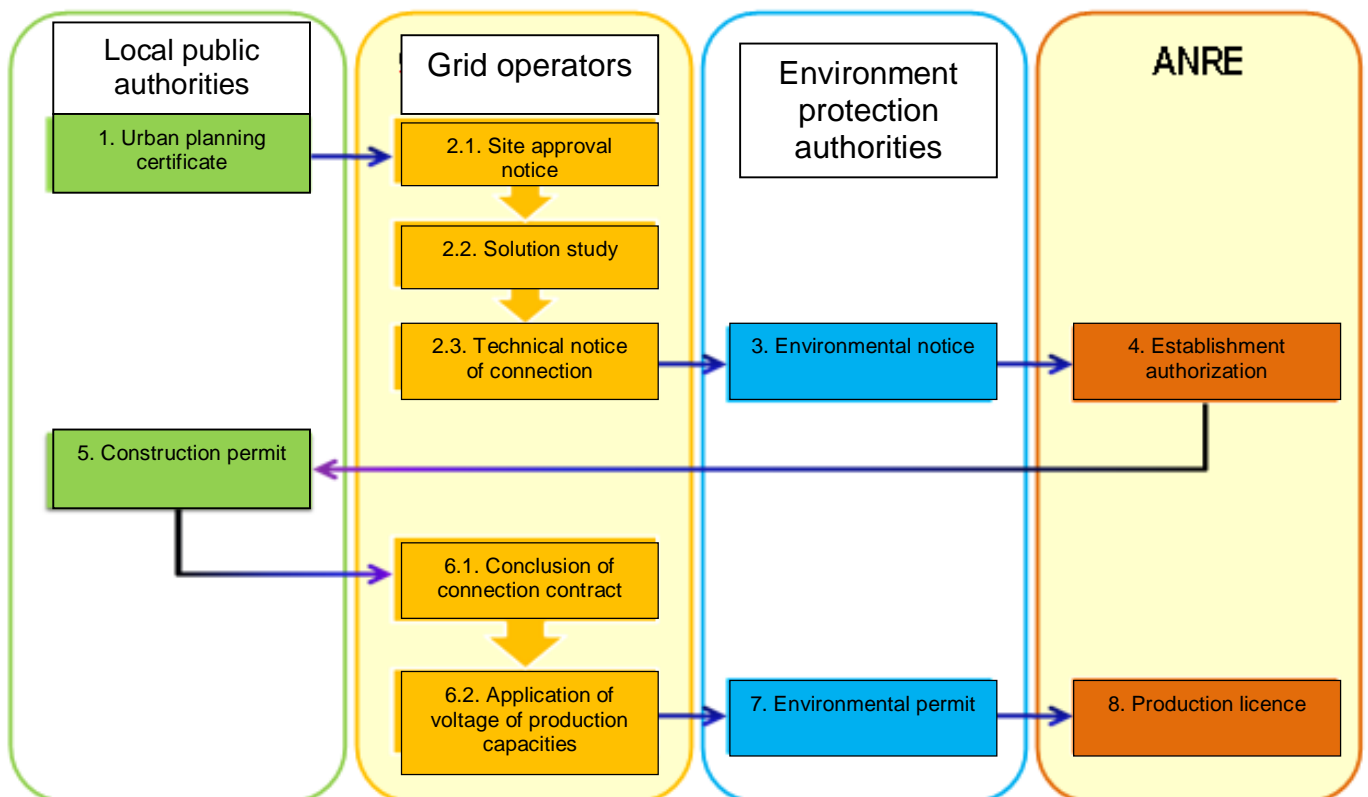
- **Building site approval notice** – issued in accordance with the *Methodology for the issuance of site approval notices* approved by ANRE Order No 48/2008;
- **Technical connection approval notice** – issued in accordance with the *Regulation on the connection of the users to the electricity grids of local interest* approved by Government Decision No 90/2008.

Documents issued by ANRE:

- **Set-up authorisation** – in accordance with the *Regulation for granting licences and authorisations in the electricity field*, approved by Government Decision 540/2004 as subsequently amended and supplemented by Government Decision 553/2007; only for energy units having power installed higher than 1 MW;

- **E-RES production licence** - in accordance with the *Regulation for granting licences and authorisations in the electricity field*, approved by Government Decision 540/2004 as subsequently amended and supplemented by Government Decision 553/2007;
- **Qualification for priority electricity production** – in accordance with the Regulation on priority electricity production from renewable energy sources approved by ANRE Order No 39/2006.

The stages of carrying out and commissioning a production capacity using renewable sources:



The sequence of stages and the maximum processing duration of the applications for set-up authorisations and licences are provided for in the Regulation for granting licences and authorisations in the electricity field, approved by Government Decision 540/2004 as subsequently amended and supplemented, as it results from the following:

- Within 15 days from the registration of the application for set-up authorisation/licence, ANRE informs in writing the applicant on the need to make completions, corrections or clarifications regarding the request and the documentation filed (Art. 26(1) of the Regulation);
- ANRE issues the decision on granting the set-up authorisation/licence requested within maximum 30 days from the date of confirming that:
 - the documentation enclosed by the applicant to its application is complete, according to the provisions of the Regulation and
 - the applicant paid the amounts invoiced by ANRE according to the applicable regulation framework.

The 30 day deadline and the conditions specified above are those stipulated in Art. 13(1) of the Regulation.

The process of issuing set-up authorisations and licences for the electricity grids follows the same stages as those specified for the production stage according to the provisions of Regulation for granting licences and authorisations in the electricity field, approved by Government Decision 540/2004 as subsequently amended and supplemented.

The authorisation/permit applicant is the person who aims at lodging the applications and the related documentation at the responsible administrative bodies according to the stages provided for the regulations regulating the issuance of the permits or authorisations and which establish the types of approvals and/or documents which must be sent prior to their issuance.

(i) Do authorisation procedures take into account the specificities of the different renewable energy technologies? If so, please describe how. If they do not, do you envisage taking them into account in the future?

The authorisation procedures applied by ANRE while complying with its legal duties takes into account the different types of technologies producing electricity and heating in CHP **that use** renewable energy.

(j) Are there specific procedures, for example simple notification, for small-scale, decentralised installations (such as solar panels on buildings or biomass boilers in buildings)? If so, what are the procedural steps? Are the rules publicly available to citizens? Where are they published? Is the introduction of simplified notification procedures planned in the future? If so, for which types of installation/system? (Is net metering possible?)

The set-up authorisations are necessary only for the execution/upgrading works of units producing electricity/electricity and heating in CHP or execution of new production capacity within such unit if the installed power of that unit is higher than 1 MW. For small-scale, decentralised installations (with an installed power lower or equal to 1 MW), the application/granting of set-up authorisation is not required.

Where the small-scale, decentralised installations are not integrated in the consumer's electricity installation thus constituting electricity production sites as such, for the commercialisation of the electricity produced, the owner of the respective installation must hold a production licence granted by ANRE.

Art. 61 of the Regulation on the provision of electricity to consumers approved by Government Decision No 1007/2004, the following is specified:

“(1) Where the electricity consumers have own power stations connected to the distribution/transmission (self-producers) electricity grids, the potential purchase of electricity from the consumer shall be subject to a separate provision contract according to the regulations of the competent authority.

(2) The quantity of electricity purchased from the electricity provider can be established, upon the consumer's request and with the provider's agreement, by sell-off with the electricity quantity produced in the same place of consumption at the same voltage and in the same settlement timetable.”

In this case, the applicable norms are the Regulation for granting licences and authorisations in the electricity field, approved by Government Decision 540/2004, as subsequently amended and supplemented, and the Regulation on the provision of electricity to consumers approved by Government Decision No 1007/2004.

For the production of renewable energy in small power distribution systems (under 1 MW) regulated prices can be applied according to Law 220/2008 amended in June 2010.

(k) Where are the fees associated with applications for authorisation/licences/permits for new installations published? Are they related to the administrative costs of granting such permits? Is there any plan to revise these fees?

The fees associated with ANRE's granting authorisations and licences, according to its competences, are approved annually by ANRE's President Order which is published in the Official Journal of Romania, Part I as well as on ANRE's webpage. In general, such fees are correlated with the administrative costs relevant to the granting of such permits but cannot reflect the efforts made in particular cases in terms of the volume of documentation reviewed (submitted by the licence/authorisation applicant), the number of letters by which the applicant is informed on the need to fill in clarification data and the submitted documentation. The fees charged by ANRE are revised on an annual basis being updated according to the inflation rate.

Differentiation is not made between the authorisation fees for RES installations and another type of constructions. Law 220 revised shall provide for construction facilities for plants generating electricity and heat based on renewable resources.

(l) Is official guidance available to local and regional administrative bodies on planning, designing, building and refurbishing industrial and residential areas to install equipments and systems using renewable energy sources in electricity and heating and cooling, including in district heating and cooling? If such official guidance is not available or insufficient, how and when will this need be addressed?

The abovementioned types of guidance are not available; the Romanian cities, signatories of the "Mayors' Pact" (16 up to the present), assumed firm commitments to carry out a "Renewable Energy Action Plan" for the respective city, which must also include special provisions on planning and designing the newly built areas with systems producing energy from renewable sources. Studies on the renewable sources potential are also being carried out at county level (Alba, Olt, Timiș, Caraș, etc.) with a view to promoting such sources.

The LEA Proposal: creation of a "Renewable Energy Action Framework-Plan" to be proposed to all the Romanian cities by the authorities (MRDT); the carrying out of the measures specified in such plan shall be sustained by special financial support programmes. An important contribution to the carrying out of this framework-plan is made by the local Romania energy agencies the majority of which are involved in supporting the signatory cities of the "Mayors' Convention".

(m) Are there specific trainings for case handlers of authorisation, certification and licensing procedures of renewable energy installations?

In the case of ANRE – the handlers of the authorisation and licensing procedures participate in specific professional training and, within exchanges of experience with similar authorities from EU or the energy community, the aspects on the authorisation and licensing procedures constitute one of the topics most frequently approached.

4.2.2. Technical specifications

(a) To benefit from support schemes do renewable energy technologies need to meet certain quality standards? If so, which installations and what quality standards? Are there national, regional standards that go beyond European standards?

The support schemes for renewable energy technologies are regulated by Law 220/2008 establishing the production promotion system of energy from renewable energy sources with the amendments approved by the Parliament in June 2010. Such schemes are described in Chapter 4.3.

This law provides for a first quality criterion **“new equipment”** defined as new plant/new electric group – plant/electric group installed **which has not been used before**;

The wind power generators/plants (WPG/WPP) which are connected to the Romanian electrical and energy system must comply with a series of technical conditions, comparable with the requirements of other European standards. Such requirements are specified in the technical document/norm: **“Technical conditions for the connection to the electricity grids of public interest for wind power plants.”** The document is national but it has also been notified to the EC and it was accepted without remarks. Following the notification to the EC, it was approved by ANRE by Order 51/2009.

The methodology implementation is performed by corroboration with the following normative acts:

- Electricity Law 13/2007, as subsequently amended and supplemented;
- Law 220/2008 establishing the production promotion system of energy from renewable energy sources with the amendments approved by the Parliament in June 2010;
- Government Decision 90/2008 approving the Regulation on the connection of users to the electricity grids of public interest;
- Order 20/2004 of the President of the National Regulation Authority in the Energy field approving the Technical code of the transmission electricity grid as subsequently amended;
- Order 128/2008 of the President of the National Regulation Authority in the Energy field approving the Technical code of the distribution electricity grids – revision I;
- Order 129/2008 of the President of the National Regulation Authority in the Energy field approving the Regulation establishing the solutions for the connection of users to the electricity grids of public interest;
- Order 48/2008 of the President of the National Regulation Authority in the Energy field approving the Methodology for the issuance of site approval notices;
- Order 4/2007 of the President of the National Regulation Authority in the Energy field approving the Technical norm on demarcation of the protection and safety areas corresponding to energy capacities – revision I, as subsequently amended and supplemented;
- Order 38/2008 of the President of the National Regulation Authority in the Energy field approving the Procedure for handling the misunderstanding related to the conclusion of contracts between the economic operators in the electricity field, the power supply contracts and the grid connection contracts;

- Order 17/2007 of the President of the National Regulation Authority in the Energy field approving the Performance standard for electricity transmission and system services;
- Order 28/2007 of the President of the National Regulation Authority in the Energy field approving the Performance standard for electricity distribution service;
- Order 17/2002 of the President of the National Regulation Authority in the Energy field approving the Electricity measuring code;
- Government Decision 1007/2004 approving the Regulation on the provision of electricity to consumers;
- SR EN 50160 – Features of the voltage supplied to public distribution grids;
- SR EN 61000 – 3-2:2006 – Electromagnetic compatibility (EMC). Part 3-2: Limits - Limits for harmonic current emissions (equipment input current • 16 A per phase);
- Norm on the limitation of the asymmetrical and deforming regime in electrical grids;
- SR EN 61000-4-7:2003, Electromagnetic compatibility (EMC). Part 4–7: Testing and measurement techniques - General guide on harmonics and inter-harmonics measurements and instrumentation, for power supply systems and equipment connected thereto;
- IEEE 519-1992 – Standard describing the accepted harmonics levels in the demarcation points between supplier and consumer;
- SR EN 61000-4-30:2003, Electromagnetic compatibility (EMC). Part 4-30: Testing and measurement techniques. Power quality measurement methods.

No express specifications are made for the other technologies.

Member of the European standardisation bodies CEN/CENELEC and ETSI through ASRO, Romania is under the obligation to adopt the European standards as national standards. A European standard can be made available to the users in Romania only under the form of national adoption and only by its standardisation body. There are no national standards stricter than the European standards.

4.2.3. Buildings

Please note that when referring to increasing the use of renewable energy sources in buildings, the supply of renewable electricity from the national grid should not be considered. The focus here is on increasing local supply of heat and/or electricity to individual buildings. The direct supply of heat or cooling through district heating and cooling in buildings could also be taken into account.

(a) Reference to existing national and regional legislation (if any) and summary of local legislation concerning the increase of the share of energy from renewable sources in the building sector:

The existing national legislation aiming at increasing the share of energy from renewable sources in the building sector includes the following normative acts:

- Law 372/2005 on the energy performance of buildings as subsequently amended and supplemented; the law stipulates that, inter alia, for the new buildings with a total net area over 1000 sqm, the authority of the local or county public administration, through the urban planning certificate granted with a view to issuing the building permit according to the law, requires the drawing up of a technical, economic and environmental feasibility study on the possibility of using other alternative energy production system such as:
 - § power supply decentralised systems based on renewable energy sources;
 - § combined heating and electricity production – CHP;
 - § district or block heating or cooling systems;
 - § heat pumps in certain conditions.
- Government Ordinance 22/2008 on energy efficiency and promotion of the use of renewable energy sources for end consumers;
- Government Decision 1661/2008 on the 2009-2010 National programme of energy efficiency and use of renewable sources;
- Order 1459/2007 approving the Implementation norms on the buildings energy performance;
- Order 540/2009 approving the Implementation norms of Government Emergency Ordinance 18/2009 on the increase of the residential buildings energy performance.
- Government Decision 462/2006 approving the programme “District heating 2006-2015 – heat and comfort” and the establishment of the Project Management Unit as subsequently amended and supplemented;
- MEF Order 565/2009 approving the Guide on financing the Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the air, water and soil quality improvement, stipulates:
 - Y the eligibility criteria to be fulfilled by the applicant of such financing;
 - Y the data on the project;
 - Y the expenses, the budget foreseen and the carrying out of the financing programme.

(b) Responsible Ministry(/ies)/authority(/ies):

- Y Ministry of Regional Development and Tourism (MRDT);
- Y Ministry of Environment and Forests (MEF);
- Y Ministry of Administration and Interior (MAI);

- Y National Regulation Authority for Public Utilities Community Services (ANRSC);
- Y National Regulation Authority in the Energy field (ANRE).

(c) Revision of rules, if any, planned by: [date]

Not applicable.

(d) Summary of the existing and planned measures at regional/local levels:

In order to increase the share of energy from renewable sources in the building sector from Romania, there are the following support schemes:

- The scheme for financing from structural funds without applying the state aid rules; the beneficiaries of such scheme are the authorities of the local public administrations and the intercommunity development associations (extensively presented in Chapter 4.4);
- "Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the air, water and soil quality improvement" financed by the Environmental Fund, the eligible beneficiaries of which are the territorial and administrative divisions and the economic operators having as main scope of activity "Hotels and other similar accommodation facilities". The territorial and administrative divisions can lodge financing projects with the Programme for the residential buildings in their property or under their management, or for the owners'/ house tenants' and flat owners' associations with legal status which are domiciled within the jurisdiction of the respective territorial and administrative divisions (extensively presented in Chapter 4.4);
- "Programme on the energy production increase from renewable sources" financed by the Environmental Fund, the eligible beneficiaries of which are large enterprises/small and medium enterprises and the economic operators that have recorded in the company's articles of incorporation the activity on the electricity and/or thermal energy production corresponding to division 35 of the NACE codes: "Production and provision of electricity and thermal energy, gas, hot water and air conditioning" (extensively presented in Chapter 4.4);
- "National programme for the increase of energy efficiency and use of renewable energy sources in the public sector for 2009-2010" which grants financing for the rehabilitation and modernisation of CTESS (centralised thermal energy supply system) including the replacement of the type of fuel for the energy-burning installations (for example passing to biomass) and for the thermal rehabilitation of certain public buildings and the use of the local potential of renewable energy sources for electricity and/or thermal energy supply (extensively presented in Chapter 4.4);
- "Programme on the installation of heating systems using renewable energy including the replacement or supplementation of the classical heating systems" (also called the "Green House Programme") intended for the natural persons who wish to supplement or replace the traditional heating and hot water systems from their dwellings with renewable energy installations.
- The "District heating 2006-2015 – heat and comfort" Programme which finances the investments made in the rehabilitation of the centralised thermal energy supply system and in the thermal rehabilitation of buildings.

(e) Are there minimum levels for the use of renewable energy in building regulations and codes? In which geographical areas and what are these requirements? (Please summarise.) In particular, what measures have been built into these codes to ensure the share of renewable energy used in the building sector will increase? What are the future plans related to these requirements/measures?

There are no minimum levels for the use of renewable energy in building regulations.

(f) What is the projected increase of renewable energy use in buildings until 2020? (If possible differentiating between residential — ‘single-unit’ and ‘multiple unit’, commercial, public and industrial.) (To answer this question you may use a table as Table 6 below. Data could be given yearly, or for selected years. Both heating and cooling and electricity consumption from renewable energy sources should be included.)

The main data in the projected increase of energy consumption from RES are presented in Table 4.2. Although based on the estimates of energy consumption until 2020 and on the analyses and estimates on the possibilities of developing energy production from RES, an increase of the energy consumption from RES was estimated for heating and cooling as well as the consumption of electricity from RES, for the 2010-2020 period, it was considered that the consumption share of energy from RES in the building sector, for the residential, services and industrial subsectors, shall be constant until 2020.

Table 4.2. Estimated share of renewable energy in the building sector
(%)

	2005	2010	2015	2020
Residential	93.1	93.1	93.1	93.1
Services	6.7	6.7	6.7	6.7
Industrial	0.2	0.2	0.2	0.2
Total	100	100	100	100

(g) Have obligations for minimum levels of renewable energy in new and newly refurbished buildings been considered in national policy? If so, what are these levels? If not, how will the appropriateness of this policy option be explored by 2015?

Up to the present, within the national policy in the field, obligations for minimum levels of renewable energy in new and newly refurbished buildings have not been considered. Law 372/2005 on the energy performance of buildings provides for the existence of certain minimum energy performance requirements for buildings, mandatory for the carrying out of the thermal and physiological comfort within the spaces of the inhabited/occupied buildings but without specifying obligations on the minimum levels of the use of energy from RES.

(h) Please describe plans for ensuring the exemplary role of public buildings at national, regional and local level by using renewable energy installations or becoming zero energy buildings from 2012 onwards? (Please take into account the requirements under the EPBD.)

At present, there are no plans aiming at ensuring the exemplary role of public buildings by using renewable energy installations or by converting such buildings into zero energy buildings. A zero energy building means a building where, as a result of very high level of the building energy efficiency, the total annual consumption of primary energy is equal to or less than the production of energy from renewable energy sources generated per location of each building. Following the adoption of the Corrected Energy Performance of Buildings Directive by the European Parliament and Council, Romania, like other Member States, will have to prepare the national plan for the share increase of zero energy buildings. As from 1 January 2019, all buildings shall be zero energy buildings.

(i) How are energy efficient renewable energy technologies in buildings promoted? (Such measures may concern biomass boilers, heat pumps and solar thermal equipment fulfilling eco-label requirements or other standards developed at national or Community level (cf. text of Article 13(6))).

Law 372/2005 on the building energy performance, fully transposing Directive 2002/91/EC of the European Parliament and Council on the building performance energy in the national legislation, stipulates that for the new buildings with a total net area over 1000 sqm, the authority of the local or county public administration, through the urban planning certificate granted with a view to issuing the building permit according to the law, requires the drawing up of a technical, economic and environmental feasibility study on the possibility of using other alternative energy production system such as:

- § power supply decentralised systems based on renewable energy sources;
- § combined heating and electricity production;
- § district or block heating or cooling systems;
- § heat pumps in certain conditions.

However there are no specific measures promoting the energy renewable energy technologies in buildings. Such technologies are promoted by the aid schemes for the promotion of the use of energy renewable sources (presented in Chapter 4.4)).

4.2.4. Information provision

a) Reference to existing national and or regional legislation (if any) concerning information requirements according to Article 14 of Directive 2009/28/EC

Several legislative acts at national level, including strategies approved by Government Decisions, contain explicit or implicit references to the information and training in the RES field. Therefore:

- Government Decision 1844/2005 promoting the use of biofuels and other renewable fuels for transport stipulates that MECBE informs the public regarding the advantages of the use of biofuels and other renewable fuels.
- Government Decision 1634/2009 on the organisation and operation of MECBE stipulates that the Minister has, inter alia, the following duties:
 - to ensure information, consultation and training of the economic operators on durable development, the durable production and consumption, climate change, the UE theme strategies;
 - to draw up guides for the implementation of the directives transposed in the national legislation in the fields it coordinates and to assess the ability of the economic operators to apply the Community acquis.

The minister supervises directly the Industry Personnel Training Centre from Buzeni.

- Government Decision 1635/2009 on the organisation and operation of the Ministry of Environment and Forestry (MEF) stipulates that the ministry shall comply with, inter alia, its task to initiate and develop educational and training programmes for the specialists in its field of activity and shall collaborate to this effect with the ministries, the other central and local public administration authorities, the education, science and culture institutions, with the representatives of the public communication means.

The RES valuation is an important component of the National Strategy and the National Action Plan in the field of climate change as well as of other national strategies and plans under the responsibility of MEF.

- Government Ordinance 22/2009 on energy efficiency and promotion of the use of renewable energy sources by the end consumers stipulates that ARCE is responsible for the promotion of RES use at consumers through actions complementary to energy market regulation. The information provision actions are included in such complementary actions.

Government Decision 1428/2009 on the organisation and operation of ANRE stipulates that ANRE takes over ARCE (which is closed down) and fulfils the duties and competences provided for by Government Ordinance 22/2009.

- The Romanian Energy Strategy for the 2007-2020 period approved by Government Decision 1069/2007 contains important provisions on the provision of information related to the RES use. It is shown that the rural area comprise a variety of renewable energy forms which can be used in the power supply of such areas or of urban areas. The measures to increase the efficiency of the use of energy in the rural areas include:
 - distribution of leaflets and other materials presenting the benefits and costs of the energy saving solutions specific to rural areas;
 - support of the rural energy consultants grids;
 - exploration of new uses for the energy surplus in the rural area especially if new places of work are created;

- systematic publishing of information on all the available forms of subsidies and grants for rural energy programmes.
- Law 315/28.06.2004 on the regional development in Romania explicitly specifies RDA duty to conduct at regional level the mediatization/advertising of the regional development programmes and projects, implicitly the durable development programmes and projects in RES valuation.
- Information provision represents an essential component in the activity of the bodies involved accessing EU structural funds (the Management Authorities of different programmes, the Intermediary Bodies etc.). Such activities are carried out in accordance with the specific legislation provision at European level:
 - Regulation (EC) 1083/2006 laying down the general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund;
 - Commission Regulation 1828/2006 on the implementation rules of the Council Regulation 1083/2006 and the Regulation (EC) 1080/2006 etc.

The internal legislation transposed the provisions of such documents so that the national legislative framework on information provision regarding the accessing of structural funds is ensured. The observance of the respective provisions is carefully monitored by the competent authorities.

Granting supporting with a view to making investments for the RES valuation is an important component of the use of structural funds and the information campaigns also aim at granting this support.

Similar information campaigns are also carried out within the support programmes exclusively financed from national funds (state budget, environmental fund etc.).

b) Responsible body/(ies) for dissemination of information at national/regional/local levels

All the ministries involved in different forms of RES valuation actions have responsibilities regarding the dissemination of information. MECBE has an important role relevant to its important functions in the energy sector and duties which it fulfils. MEF also has a significant role.

ANRE:

- monitors the development and the operation of GC market, draws up annually and makes publicly available a report on the operation of the E-RES promotion system;
- draws up annually and makes publicly available a report on the issuance of origin guarantees for E-RES delivered in electricity grids.

All the regulations and annual reports drawn up by ANRE can be accessed on the website of the institution www.anre.ro.

According to Government Decision 1428/2009 ANRE took over ARCE (which was closed down) thus taking over ARCE's responsibilities on the dissemination of information in the RES field.

The ministries involved in the carrying out of certain national or international programmes aiming at the use of RES conduct information dissemination campaigns on RES and the respective programmes.

The Intermediary Energy Body (IEB) managing the financial support granted for investments projects in RES valuation in Axis 4 of SOP IEC is organised within MECBE – DGEOG. IEB carries out informative campaigns on accessing non-

refundable financing within SOP IEC for investments in the modernisation and execution of new electricity and thermal energy production capacities by valuating the renewable energy resources: the biomass, the hydro-energy (in units with installed power lower or equal to 10 MW), solar and wind power resources, the biofuels, the geothermal resources and other renewable energy sources.

RDC and DRA organised within the eight development regions of the country have duties laid down by law (and presented in the previous paragraph) in the field of information dissemination.

An important role in the dissemination of information pertains to the professional associations (which are non-governmental organisations) that supports the RES promotion. Many of such associations are integrated in European grids and have an important role in the transfer of good practices while educating the population and in the information exchange between specialists, in publishing information in magazines, leaflets or on the internet.

The companies producing equipment carry out intense advertising campaigns by promoting the RES use.

c) Summary of the existing and planned measures at regional/local levels (where relevant))

RDA carries out important activities in the field of information and training.

RDA Nord-Vest established the Regional Institute for Education, Research and Technological Transfer. The institute is established as joint-stock company, the founding members being the county councils from the region, RDA Nord-Vest, several universities in the area etc. and, by means of an integrated approach of education, research and technological transfer, aims at becoming a model of excellence in innovation. The professional training and informative services activities have an important role for the institute. Among the programmes to which RDA Nord-Vest participates in the RES field, the project CLUSTHERM is mentioned, project that aims at establishing a cluster in Central and Eastern Europe for the valuation of geothermal energy.

As from 2007, the Agency's communication activities intensified evolving from the institutional communication level to the public communication level.

The Agency publishes several publications (monthly institutional newsletter InfoREGIO UPDATE, InfoREGIO magazine), organises information campaigns through mass-media, has its website, publishes advertising brochures etc. All these actions also reflect the topic on valuating RES in the area.

RDA Sud-Est participated in the 2005-2008 period in the carrying out of the ARISE project as coordinator in partnership with the government of Toscana and Etruria Innovazione region. Within this project, a Regional Innovation Strategy was drawn up with five priorities, one of which is the RES valuation in the south-eastern region. Among the actions to be implemented in the 2008-2015 period within the priority mentioned, the following are included:

- Raising awareness on the alternative energy solutions at the level of the local public administrations, the educational system, the research institutes and SMEs;
- Implementation and dissemination of pilot projects for alternative energy sources, energy saving and streamlining.

The other RDA conduct significant activities in the analysed field.

d) Please indicate how information is made available on supporting measures for using renewable energy sources in electricity, heating and

cooling and in transmission to all relevant actors (consumers, builders, installers, architects, suppliers of relevant equipment and vehicles). Who is responsible for the adequacy and the publishing of this information? Are there specific information resources for the different target groups, such as end consumers, builders, property managers, property agents, installers, architects, farmers, suppliers of equipment using renewable energy sources, public administration? Are there information campaigns or permanent information centres in the present, or planned in the future?

- ANRE publishes, on the webpage www.anre.ro, the Guide for producers of renewable energy sources, document containing information on the applicable regulation system for the development and operation of the E-RES production capacities. It also publishes primary and secondary legislation applicable in the E-RES production field. A list of E-RES producers qualified for priority production is published on the institution website on an annual basis.
- The Management Authorities of the programmes financed from the structural funds are constantly carrying out information campaigns on accessing such funds. Campaigns are conducted on specialised websites, through mass-media, special newsletters drawn up by the bodies involved, through conferences etc. and ensure a wide dissemination of the information on the support measures offered. Such campaigns refer mostly to the actions carried out and/or planned within the organised priority programmes/axes. According to the partnership principle, the Management Authorities involve in the information and advertising measures at least one of the following bodies:
 - national, regional or local authorities and development agencies;
 - commercial and professional associations;
 - economic and social partners;
 - non-governmental organisations;
 - organisations representing the business environment;
 - information centres of the European representative offices;
 - education institutions.

e) Who is responsible for publishing information on the net benefits, costs and energy efficiency of equipment and systems using renewable energy sources for heating, cooling and electricity? (Supplier of the equipment or system, public body or someone else?)

The legislation does not contain explicit provisions on the responsibility for publishing information on the net benefits, costs and energy efficiency of equipment and systems using renewable energy sources for heating, cooling and electricity. Such information are published by the mass-media and the advertising campaigns conducted by the companies producing equipment or the construction-assembly companies.

f) How is guidance for planners and architects provided to help them to properly consider the optimal combination of renewable energy sources, high efficiency technologies and district heating and cooling when planning, designing, building and renovating industrial or residential areas? Who is responsible for that?

The legislation does not contain explicit provisions on the responsibility for the guidance of specialists during the comparative examination and evaluation process of the optimal combination of renewable energy sources, high efficiency technologies and district heating and cooling when planning, designing, building and renovating industrial or residential areas.

Efforts in this respect are made by the professional associations and the specialised departments of universities. In this regard, the Romanian Association of Building Services Engineers has a constant preoccupation on the occasion of the annual conferences or other such events with concrete topics.

The producing companies and providers of technology and equipment for the valuation of renewable energy sources and co-generation sources periodically organise promotion and information actions for specialists.

The Calculation methodology on the buildings energy performance, drawn up according to Law 372/2005 on the buildings energy performance, refers to the use of renewable energy sources but without concrete indications on the method of comparative analysis and optimisation of the technologies applied.

g) Please describe the existing and planned information, awareness raising and training programmes for citizens on the benefits and practicalities of developing and using energy from renewable sources. What is the role of regional and local actors in the designing and managing these programmes?

Taking into consideration the economic difficulties experienced by Romania lately, it was not possible to initiate national programmes financed from the budget for the information, awareness raising and training programmes for citizens on the benefits and practicalities of developing and using energy from renewable sources. The lack of such programmes was partially compensated by the information published by the mass-media and the advertising campaigns conducted by the companies producing equipment or the construction-assembly companies.

The state institutions consider the initiation of such programmes insofar the situation of the state budget will allow their financing.

Thus, MEF plans actions with a view to presenting the public the state of forests in an objective manner comprising essential technical data and underlining the important points on the political agenda such as climate changes, the energy security and biodiversity. The actions undertaken by this ministry in the sense of informing the actors of the forest policy and energy policy as well as the public, shall be pursuant to the Declaration from Jihlava (2009) on communication in the field of EU forests and forestry, and shall be built on the results of the working group formed in 2010 and coordinated by the Permanent Forestry Committee (PFC) of the European Commission.

More information, awareness-raising and training programmes for citizens are carried out by non-governmental organisations including within the programmes financed by the European Commission.

At regional level, RDA also include, in their programmes, information, awareness-raising and training actions for citizens on the RES use. The volume of such information is increasing corresponding to the increase in importance of such problem.

4.2.5. Certification of installers

(a) Reference to existing national and/or regional legislation (if any) concerning certification or equivalent qualification schemes for installers according to Article 14(3) of the Directive 2009/28/EC:

There is not yet specific legislation concerning certification or equivalent qualification schemes for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps. Actually, the Romanian classification of occupations (RCO) does not expressly specify the profession of installer in the field of RES installations but, for example, only “central heating system and gas installer”, “electrician” etc. are included.

Given these circumstances, a certification system for practising an activity/profession, which is not officially recognised, is not in place. The activities involving RES installations are carried out by “general” installers. Actions have been taken with a view to supplementing RCO with professions specific to the RES installations.

(b) Responsible body/(ies) for setting up and authorising certification/qualification schemes by 2012 for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps:

The responsible bodies have not yet been established.

(c) Are such certification schemes/qualifications already in place? If so, please, describe.

The authorisation systems or the equivalent qualification schemes for installers lay down, among other things, that installers are required, in advance, water and sewer installer and/or electrician training. These two qualifications are currently included in the List of Occupations which is periodically approved and updated by Joint Order of the Minister of Labour, Family and Social Protection and the Minister of Education, Research, Youth and Sports.

Electricians carrying out activities of design/installing electrical installations connected to NES are authorised by the competent authority, Romanian Energy Regulatory Authority.

The installers carrying out activities in the field of installations under pressure are authorised by the competent authority, ISCIR (State Inspection for the Control of Boilers, Pressure Vessels and Hoisting Equipment).

(d) Is information on these schemes publicly available? Are lists of certified or qualified installers published? If so, where? Are other schemes accepted as equivalent to the national/regional scheme?

In general, the information regarding the List of Occupations and the authorisation schemes or the certification schemes are public on the National Adult Training Board website.

The lists of installers to be authorised pursuant to Article 14(3) of Directive 2009/28 shall be published on the website of the bodies in charge with the certification of the authorisation/qualification systems for installers when such bodies have been designated.

The data can be found on the UPB Energetica (Polytechnic University of Bucharest, Power Engineering Faculty), ANRE and ISCIR websites.

(e) Summary of existing and planned measures at regional/local levels (where relevant).

The following measures are planned:

MECBE (*Ministry of Economy, Commerce and Business Environment*) shall request the Ministry of Labour to include the qualification for the 3 categories of installers specified by the Directive in RCO (Romanian Classification of Occupations). An aggregate qualification (for the 3 categories of installers) or a qualification for each of the 3 categories of installers may be requested. Following its inclusion in RCO, the qualifications shall be included in the List of Occupations which is periodically approved and updated by Joint Order of the Minister of Labour, Family and Social Protection and the Minister of Education, Research, Youth and Sports.

Concomitantly, an occupational standard shall be drawn up. In this regard, the professional associations in the field of renewable energies together with MECBE shall notify the National Adult Training Board on the intention to draw up the draft of standard which shall be approved by the relevant sectoral committee within the National Adult Training Board.

Following the validation of the standard by the sectoral committee, it shall be approved by the National Adult Training Board.

Following the completion of the abovementioned stages, the professional training providers shall request the National Adult Training Board to acknowledge the courses. The National Adult Training Board shall verify whether the proposed course complies with the requirements of Directive 2009/28 and of the occupational standard and on the basis of this assessment, the course shall be accredited. On the basis of the accreditation, the professional training providers shall offer the courses the graduation of which shall be attested by the certificates required by the Directive.

Special courses for installers for renewable energy systems shall be introduced by non-governmental organisations such as: SUNE - Employers Association Renewable Sources of Energy, in cooperation with the accreditation bodies ANRE and •SC•R.

In addition, there is also the certification system of energy technical experts and auditors for buildings and electrical and thermal installations.

Such courses are offered by UTCB (*Technical University of Civil Engineering Bucharest*) (post-graduate courses – 3 months) for energy audit for buildings and certification with MLPTL – Ministry of Regional Development and Tourism according to Order 550/3003 up to 1083/2009.

The energy audit and certification courses are offered in cooperation with UPB - Power Engineering Faculty (post-graduate electrical energy, thermal energy and energy management audit courses) and ARCE - National Agency for Energy Conservation (currently within ANRE).

4.2.6. Electricity infrastructure development

a) Reference to existing national legislation concerning requirements related to the energy grids

The legal framework has been continually improved in accordance with the Community legislation, but also in the context of our country shifting to a functional market economy. The most important infrastructure law for electricity is the **Electricity Law 13/2007** as subsequently amended and supplemented.

The law lays down the regulatory framework for the carrying out of the activities in the sector of electricity and thermal energy produced in co-generation.

Of the objectives to be achieved by such activities, the following are mentioned:

- ensuring non-discriminatory and regulated access of all participants to the electricity market and energy grids of public interest;
- ensuring the interconnected operation of the National Electrical Energy System with the electrical energy systems of the neighbouring countries and with the electrical energy systems of the Union for the Coordination of Transmission of Electricity (UTCE)
- promoting the use of new and renewable energy sources;
- ensuring operation safety of the National Electrical Energy System.

The law lays down the powers and duties of ANRE, TSO and DO.

Other legislative documents complete the provisions of this law, inter alia:

- Law 220/2008 on the establishment of the promotion system of the energy produced from renewable energy sources with the amendments approved by the Parliament in June 2010;
- Government Decision 90/2008 approving the Regulation on the connection of users to public interest electricity grids;
- Government Decision 1069/2007 approving the Energy Strategy of Romania for the period 2007-2020.

ANRE regulations play an important role in developing the electricity infrastructure.

Of these regulations, the following are mentioned:

- Technical code of transmission electricity grids approved by Order 20/2004;
- Performance standard for electricity transmission and system services approved by ANRE's Order No 17/2007;
- Technical code of distribution electricity grids approved by ANRE's Order 128/2008;
- Performance standard for electricity distribution service approved by ANRE's Order No 28/2007;
- Commercial Code of Electricity Wholesale Market approved by ANRE's Order 25/2004;
- Electricity measuring code approved by ANRE's Order 17/2002;
- Regulation for the management and operation of maintenance approved by ANRE's Order 35/2002;
- Regulation on establishing solutions for users' connecting to the electricity grids of public interest approved by ANRE's Order 129/2008;
- Technical norm "Technical connection conditions to electricity grids of public interest for wind power plants" approved by ANRE's Order 51/2009.

The orders of the Ministry of Economy, Commerce and Business Environment complete the legislative framework and contribute to the ministry's carrying out its

duties laid down by the law. In the context of the electricity infrastructure development, the following are mentioned:

- Order 2243/2009 approving the state aid scheme on supporting the investments in the expansion and modernisation of the electricity and natural gas distribution grids;
- Order 2285/2008 launching the Call for proposals of projects of investments in the expansion and modernisation of the electricity, natural gas and oil transmission grids proposed for the granting of non-refundable financial assistance through the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC);
- Order 2288/2008 launching the Call for proposals of investment projects for the major intervention field 3 “Diversification of interconnection grids with a view to increasing the energy supply safety”; Operation 4.3 “Support of investments in the interconnection of the national electricity and natural gas transmission grids with the European grids within priority Axis 4 “Increasing energy efficiency and security of supply, in the context of combating climate change” of the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC).

b) How is it ensured that transmission and distribution grids will be developed with a view to integrating the targeted amount of renewable electricity while maintaining the secure operation of the electricity system? How is this requirement included in the transmission and distribution operators' periodical grid planning?

The development of the electricity infrastructure after 1990 was influenced by the phenomena specific to the transition period from a centralised economy to the market economy and, first, by the economic crisis from the period 1990 – 2000.

The Energy Strategy of Romania for the period 2007-2020 analyses the technical condition of the installations in 2007 and indicates that:

- the electricity distribution grids (EDG) are characterised by an advanced degree of physical wear (approximately 65%) of the low, medium and high voltage (110kV) electricity lines, the transformer stations and transformer substations. Obsolescence adds to this, 30% of the plants being equipped with machinery produced in the '60s.
- The investments made so far in the electricity transmission grid (ETG) allowed, in the first phase, the creation of a new and modern dispatch management system and the necessary infrastructure for the operation of electricity markets. The modernisation programme of the entire grid at the level of the highest European standards with modernisation and retrofitting works of the most important power stations of ETG, and of the development of the interconnection lines capacity is in progress.

The same document specifies that in the electricity transmission and distribution activities, the following are taken into consideration:

- to continue the development, modernisation and retrofitting process of the transmission and distribution grids as intelligent grid with the appropriate preparation for the connection of renewable sources to the grid;
- to lay HVDC submarine electrical cable between Romania and Turkey in partnership with private investors;

- to analyse the appropriateness of building a back-to-back power station in Isaccea, to identify the potential participants in the power station design and building company;
- to increase the interconnection degree with the European Union Member States and the Black Sea area in order to benefit from the strategic position of Romania in the electricity transit from approximately 10% at present to 15-20% by 2020;
- to evaluate the possibilities of unifying state-owned (non-privatised) distribution companies in a single company which, based on performance criteria and private management, can become an important regional player;
- intention of TSO to make investments of 2 billion EUR with the following structure:
 - 1.45 billion Euro direct investments from tariff;
 - 0.15 billion Euro investments from tariff, in special conditions (direct investments abroad: lines in Republic of Moldavia and contributions to the submarine cable project);
 - 0.45 billion Euro investments from the connection fee (new electricity production units, accumulation-pumping hydroelectric power plant Tarnita-L•pustesti etc).

Electricity Law No 13/2007, the Technical code of transmission electricity grids, the Technical code of distribution electricity grids and other legislative acts contain explicit provisions on the development of the transmission and distribution grids.

TRANSELECTRICA is under the obligation to draw up a perspective plan for each 10 consecutive years and to update it every two years on electricity transmission consistence with the current status and future evolution of the electricity consumption. The perspective plan is submitted for endorsement to the competent authority (ANRE) and for approval to the line ministry (MECBE). This is a public document and it is displayed in the TRANSELECTRICA web page.

The ETG development perspective plan shall provide for the following:

- the coverage of power and electricity consumption in conditions of safety and economic efficiency according to the national energy policy;
- the correlation of actions between Transelectrica and the participants in the electricity market regarding any requested service which may influence the operation safety of NES;
- the zoning opportunities for ETG connection and use depending on the consumption development forecast and the need of newly installed capacities for the purpose of efficient operation in safety conditions;
- the determination of the reserve level in NES for electricity production and transmission during consumption peaks according to the sizing requirements.

The planning of EDG development and modernisation within NES shall be carried out by each distribution operator (DO).

The planning shall be carried out based on a perspective development study of the respective electricity grid for an average period of 5 years and a maximum period of 10 years and the study shall be founded in technical and economic terms. The solutions chosen shall also allow the development of installations after this period without essential modifications, with the integration of the main elements of the existing grids (the solutions must be self-structuring). The study shall be updated annually.

The medium-term perspective plan (5 years) and its annual updates shall be submitted for endorsement to the competent authority and it is a public document. On the basis of the perspective plan, each DO draws up the annual investment programme for EDG development and modernisation. The planning of EDG

development shall ensure, inter alia, the evacuation of power from the producers' plants including from the local distributed production installations.

c) What will be the role of intelligent grids, information technology tools and storage facilities? How will their development be ensured?

The Energy Strategy of Romania for the period 2007-2020 provides for the construction of the accumulation and pumping hydroelectric power plant Tarnita-Lapustesti with an installed power of 1000 MW. The construction of such power plant is also taken into consideration in the ETG Development Perspective Plan drawn up by TRANSELECTRICA for the period 2008-2017. This document specifies that the power plant shall have four groups, each having a unit power in generator system of 256 MW and 270 MW in pump system. It is considered that this power plant is strictly necessary in order to obtain the production/consumption balance in NES in the context of the two nuclear units, the thermoelectric plants with basic operation and the wind power plants with priority operation.

The strategy also provides for the initiation of the execution works of CHE Islaz in order to ensure the reversible operation conditions of the aggregates in the hydro energetic system on the Lower Olt. The installed power in pumping system of this power plant shall be approximately 250 MW.

The Electricity Law 13/2007 stipulates that TSO should operates, retrofits, rehabilitates and develops: the ETG installations, the measuring and metering installations of the electricity transfer through ETG and at the interface with users, the computer technology and telecommunications within ETG.

In 2007, Transelectrica completed a uniform remote metering system for the wholesale market allowing:

- the synchronic measurement (time measurement at present, according to the regulations in force) of the active and reactive energy;
- the acquisition, transmission, validations, data import from other measuring operators;
- processing and compilation of all data;
- automatic information export to TSO, the Commercial Operator (OPCOM) and the authorised and interested entities.

In the future, TSO shall be in charge of integrating the new power stations, which are to be built, in NES (in terms of electricity measurement) and TSO shall also be in charge of the metering systems to be implemented on the occasion of retrofitting Transelectrica's power stations.

Through the Project for the creation of the Transelectrica remote metering system, portable equipment for electricity quality measurement (for a limited period of 1-2 weeks) was purchased and a monitoring system of the electricity quality parameters at the major consumers directly connected to ETG, with data remote transmission to the data management centre within Centrul OMEPA Sibiu (Sibiu South Station) was established.

During 2008 and 2009 the aim was to carry out the investment project "Integrated power quality monitoring system within ETG" which allows online verifications as well as on different periods of time of the NES behaviour in terms of the transited power quality. This system integrates all the equipment measuring the electricity quality existing at present.

The permanent consolidation and the IT&Tc infrastructure expansion represent one of Transelectrica's concerns.

TRANSELECTRICA is currently performing a state-of-the-art gridding architecture development contract in order to increase the data processing capacity and the diversification of the services offered at national level.

d) Is the reinforcement of the interconnection capacity with neighbouring countries planned? If so, which interconnectors, for which capacity and by when?

The transmission-dispatch system rehabilitation and modernisation project (approved by Government Decision 1149/2000, launched in 2001 and completed in 2007) allowed in 2003 the accession to the Union for the Coordination of Transmission of Electricity (UCTE) and in 2004 the synchronic connection of the National Energy System (NES) to UCTE. Thus, the following were ensured: increase of NES operation safety, new opportunities of cross-border electricity commerce and the integration of Romania in the regional electricity market.

TRANSELECTRICA's current investment programme aims at increasing the interconnection capacity with the neighbouring systems. The three projects, for which memorandums of understanding are already in place and concluded with the partners, were taken into consideration:

- The creation of the second interconnection line of 400 kV with Serbia;
- The creation of an interconnection with the Turkish Electrical Energy System through submarine cable;
- The increase of the electricity exchange capacity with the Republic of Moldavia and Ukraine through OL 400 kV Suceava - B•l•i.

For this purpose, the reference terms have been approved and the feasibility studies are being drawn up.

ETG Perspective Plan presented above includes also the necessary internal consolidation on the directions of the power flows transited through the interconnection stations:

- Creation of OL 400 kV Por•ile de Fier – Re•ia and the passage to 400 kV of axis Re•ia – Timi•oara – Arad;
- Creation of OL 400 kV G•d•lin –Suceava.

e) How is the acceleration of grid infrastructure authorisation procedures addressed? What is the current state and average time for getting approval? How will it be improved?

The authorisation procedures on the access of an E-RES producer to the public grid are laid down in the Regulation on the user's connection to the electricity grids of public interest approved by Government Decision 90/2008. The main dispositions of this Regulation shall be summarised below.

The connection applications for production installations rated at more than 50 MVA are addressed to the transmission operator by the applicants.

The connection applications for production or consumption installations up to 50 MVA included are addressed to the distribution operator from the respective area.

For a producer to connect to the electricity grid of public interest, the following steps must be taken:

- The stage on the preliminary documentation and information of the future producer

The producer can request the grid operator information on the conditions and possibilities of connecting a production installation to the grid presenting its characteristic data.

The grid operator submits such information in writing, free of charge, within maximum 15 calendar days.

- The future producer shall file its connection application and the relevant documentation in order to obtain the technical notice of connection

The producers are under the obligation to request the technical notice of connection before starting the execution of the installations to be connected to the electricity grid. The documentation attached to the connection application shall include, inter alia, the solution study for the connection to the electricity grid (if already drawn up).

The connection solution shall be established by the grid operator through the solution.

The solution study shall be drawn up by the grid operator and shall be paid by the applicant. The time limit for the drawing up of this study is maximum 3 months for the connection to a voltage grid of 110 kV or higher and maximum one month for the connection to a medium or low voltage grid.

The grid operator shall cooperate with the users in order to establish the most advantageous connection solution to the electricity grid from a technical and economic point of view.

- The grid operator shall issue the technical notice of connection as connection offer

The operator is under the obligation to submit the technical notice of connection to the applicant within maximum 30 calendar days from the registration of the complete documentation.

When the issuance of the technical notice of connection by the DO is carried out in consultation with TSO, the regulated limit time shall be prolonged up to the receipt of its point of view but no more than 30 calendar days.

The technical notice of connection consists in technical and economic conditions for the connection to the grid and constitutes the grid operator's offer to the connection application.

- The conclusion of the connection contract between the grid operator and the user

Following the receipt of the technical notice of connection, the applicant can request the conclusion of the connection contract. It shall pay the grid operator the connection tariff set according to the methodology approved by the ANRE.

The grid operator is under the obligation to propose the draft of contract within maximum 10 calendar days.

Following the conclusion of the connection contract and under the conditions therein, the grid operator shall ensure the design, construction and start-up of the connection installation including ensuring all the necessary technical conditions in the upstream installations.

- The conclusion of the execution contract between the grid operator and the contractor and the construction of the connection installation to the electricity grid; start-up of the connection installation.
- Connection of the use installation to power supply.

f) How is coordination between grid infrastructure approval and other administrative planning procedures ensured?

The actual initiation of the activities related to the carrying out of a new project shall be preceded by the obtaining of the technical notice of connection to the grid. The application, which is filed in order to obtain such notice, shall be accompanied by a documentation including the documents drawn up by the local authorities or other state institutions (urban planning certificate, the property deed or concession documents for the land, environmental permit, cadastral documents etc.). The obtaining of such documents is subject to distinct regulations which sometimes differ from one region to another.

Investors have frequently complained that they have to take too many actions in order to obtain all the necessary documents and notices. In order to facilitate their efforts, the Government declared that it would open a singular office at county level. Investors shall address to this singular office and subsequently, this office shall handle the obtaining of all the notices and the drawing up of all the necessary documentation.

According to the research project Wind Barriers financed by EU and coordinated by the European Wind Energy Association (EWEA), Romania is on the third place in Europe in terms of the rapidity with which the building permit for a wind power plant can be obtained. Thus, on average, 15 months are necessary for the obtaining of a building permit for a wind power plant, on the first two places being Finland (eight months) and Austria (ten months). The European average is 42 months. The average number of authorities that must be contacted for the obtaining of the permit in Romania is 13.10, the European average being 18.16 (for onshore installations).

g) Are priority connection rights or reserved connection capacities provided for new installations producing electricity from renewable energy sources?

Electricity Law 13/2007 provides for the non-discriminatory and regulated access of all the participants to the electricity grids of public interest. Thus, Government Decision 443/2003 does not stipulate connection rights or reserved connection capacities for new installations producing E-RES.

However, TSO and DO are under the obligation to draw up 10-year perspective plans (in the case of TSO) and 5-year perspective plans (in the case of DO) and to carry out the grids development taking into consideration the E-RES production development.

The ETG Perspective Plan for the period 2008-2012 and 2017, only for orientation purposes, when describing the reference stage 2017 in depth, the power installed in the wind power plants was considered 3000 MW as follows:

- 1700 MW in station 400kV Tariverde;
- 600 MW in station Vânt;
- 354 MW in Moldavia: F•Iciu Berezeni, Ro•ie•ti, Vetri•oia, Smârdan-Gutinas area;
- 105 MW in Tulcea County: Baia and Corugea-Ci•meaua Nou•;
- 90 MW in Medgidia Sud area: Pe•tera;
- 120 MW in Medgidia Nord area: Târgu•or and Sili•tea.

In 2008, TRANSELECTRICA drew up a Substantiation Study on the company's strategy related to the integration of wind power plants into the national energy system. The study analyses the functional features of the wind power plants and their implications on the national energy systems. Inter alia, it shows that:

- in Romania, the problem of connecting the wind power plants to NES is currently characterised by the concentration of applications in Dobrogea area. Taking into consideration the relatively low consumption of the area, the

development of the nuclear power plant (4x710 MW), the projects for the construction of thermal energy plants and the interconnection links, there is the problem of connecting such plants to ETG/EDG as regards the capacities of the grids in Dobrogea area and the voltage adjustment in the area.

- The applications for the connection of wind power plants to NES in Transylvania and Moldavia areas do not yet pose special problems in terms of the capacities of the power evacuation grids from the respective areas.

In order to solve all the above-mentioned aspects, an area study is in progress and it aims at proposing a target grid capable of taking over the surplus of Dobrogea area in the context of using the existing capacities and new developments of ETG. The proposed solution:

- shall maintain NES operation safety;
- shall ensure the compliance with the technical quality parameters of the transmission and system services;
- shall ensure the electricity transmission without grid congestions for high oscillations of the power generated in the wind power plants;
- shall allow maximum flexibility in implementation in order to adjust to the existing uncertainty elements regarding the installed power volume and its location.

h) Are any renewable installations ready to come online but not connected due to capacity limitations of the grid? If so, what steps are taken to resolve this and by when is it expected to be solved?

There are not any renewable installations ready to come online but not connected due to capacity limitations of the grid.

i) Are the rules on cost sharing and bearing of grid technical adaptations set up and published by transmission and distribution system operators? If so, where? How is it ensured that these rules are based on objective, transparent and non-discriminatory criteria? Are there special rules for producers located in peripheral regions and regions with low population density?

The aspects regarding grid connection are regulated by Government Decision 443/2003 approving the Regulation on the connection of users to electricity grids of public interest. The document was initially published in Official Journal No 109 of 12 February 2008 and can be easily found on numerous websites. TSO and DO drew up informative materials in accessible language where they make available to the TNC applicants the information contained in Government Decision 443/2003.

There are no special rules for producers located in peripheral regions and regions with low population density.

j) Please describe how the costs of connection and technical adaptation are attributed to producers and/or transmission and/or distribution system operators? How are transmission and distribution system operators able to recover these investment costs? Is any modification of these cost bearing rules planned in the future? What changes do you envisage and what results are expected?

The costs of connection of a user to the electricity grid are incurred by the user through the connection tariff which is paid to the grid operator. The works for the construction of the connection installation are fully incurred by the user.

The costs of consolidation works of the electricity grid upstream from the connection point, intended for the connection of a production point or exclusively intended for or in proportion of over 60% to the connection of a consumption point are incurred by both the grid operator and user. The method and participation share of the parties in bearing the consolidation costs, in such cases, are regulated by ANRE through a normative act which is now in preparation.

k) Are there rules for sharing the costs between initially and subsequently connected producers? If not, how are the benefits for subsequently connected producers taken into account?

The producer initially connected to the grid receives financial compensation from the producers subsequently connected in the first five years from the start-up of the connection installation. This is determined by the grid operator based on a methodology approved by ANRE (ANRE's Order 28/2003).

l) How will it be ensured that transmission and distribution system operators provide new producers wishing to be connected with the necessary information on costs, a precise timetable for processing their requests and an indicative timetable for their grid connection?

Government Decision 443/2003 lays down the steps to be taken in relation with TSO and DO respectively by a new producer that wishes to connect to the grid as well as the timetables relevant to each stage. The document also specifies that the grid operator shall cooperate with the applicant in order to establish the most advantageous connection solution to the electricity grid in technical and economic terms. Thus, applicants have access to the information on costs and indicative timetable for the grid connection.

4.2.7. Electricity grid operation

- a) How is the transmission and distribution of electricity from renewable energy sources guaranteed by transmission and distribution system operators? Is priority or guaranteed access ensured?*

The legislation in force (Government Decision 443/2003, Law 220/2008 with the amendments approved by the Parliament in June 2010) stipulates that the grid operators are under the obligation to guarantee the transmission and distribution of electricity produced from RES without jeopardising the viability and safety of the grids.

After having granted the technical notice of connection and gone through all the other stages laid down by the Regulation on the connection of users to the electricity grids of public interest approved by Government Decision 443/2003, TSO and DO assumes, therefore, the responsibility to guarantee the transmission and distribution of electricity produced from renewable energy sources in safety and viability conditions. Details are presented in Chapter 4.2.6 (e).

- b) How is it ensured that transmission system operators, when dispatching electricity generating installations give priority to those using renewable energy sources?*

The Commercial Code of the Wholesale Electricity Market (approved by ANRE's Order 25/2004) includes the E-RES production units in the category of priority production units and through its provisions, it ensures the priority takeover of the production validated by E-RES on the wholesale electricity market and dispatching respectively.

The qualification as priority production is granted according to the provisions of the *Regulation on qualifying the priority production of electricity from renewable energy resources* approved by ANRE's Order 39/2006, usually on an annual basis, for the entire electricity production and for the entire capacity.

The producer of green energy qualified for priority production shall have the following rights:

- to submit MND offers for the green energy which was notified and was not contracted by means of bilateral contracts;
- to trade with priority on MND the electricity quantities notified and validated as available priority production after considering the electricity quantities of the contracts bilaterally negotiated by the respective producer;
- to benefit, according to the legislation in force, from the system promoting the electricity produced from renewable resources;
- to submit to TRANSELECTRICA physical notifications for unbalances as regards the priority production remained untraded on MND.

The Regulation stipulates that the producers qualified for uncontrollable priority production are not financially penalised for the unbalances caused by the production units qualified for uncontrollable priority production. The producers qualified for uncontrollable priority production involved in transactions on MND or in bilaterally negotiated sale-purchase contracts, shall be exempt from the abovementioned provision.

- c) *How are grid- and market-related operational measures taken in order to minimise the curtailment of electricity from renewable energy sources? What kinds of measures are planned and when is implementation expected? (Market and grid design that enable the integration of variable resources could cover measures such as trading closer to real time (changing from day-ahead to intra-day forecasting and rescheduling of generators), aggregation of market areas, ensuring sufficient cross border interconnection capacity and trade, improved cooperation of adjacent system operators, the use of improved communication and control tools, demand-side management and active demand-side participation in markets (through two-way communication systems — smart metering), increased distributed production and domestic storage (e.g. electric cars) with active management of distribution grids (smart grids).*

The legislative framework in force (including ANRE regulations) lay down operational measures on the grid and market in order to minimise the curtailment of E-RES. Therefore, in the event that the producers face difficulties in selling the electricity on competitive market, they can opt to sell energy for a regulated price to the suppliers providing electricity to the captive consumers. Such suppliers are under the obligation to purchase the respective electricity; at present, according to ANRE's Order 44/2007, this regulated price is 132 lei/MWh (approximately 32 Euro/MWh); the validity of such provisions shall terminate on the effective date of the promotion system established by Law 220/2008 and Government Decision 1479/2009, after the European Commission has authorised this system respectively.

Government Decision 1479/2009 stipulates that following the entry into force of the new system, only the producers of E-RES produced in plants with installed powers below 1 MW can opt to trade E-RES either for a regulated price or for a negotiated price. Within 60 days from the effective date, ANRE shall draw up the methodology for the calculation of the regulated price.

At the beginning of this year, SC Opcom SA initiated, upon the request of the participants on the electricity market and based on public consultation process, the introduction of the intra-day electricity trading. First, this shall be carried out in one session in day D-1 and subsequently, in various sessions, including day D (delivery day). This shall allow participants on the electricity market (including the participants using renewable energy resources) to trade electricity closer to real time. The intra-day market is expected to be operational by the end of 2010.

As regards the improvement of the cooperation with the adjacent system operators, we specify the following:

- TRANSELECTRICA already concluded with the Hungarian TSO (MAVIR), in November 2009, a bilateral agreement on the joint allocation of the annual, monthly, weekly interconnection capacities as well as for the next day;
- TRANSELECTRICA is taking the necessary steps to conclude such agreements with the other neighbouring TSOs as well during the same year;
- Moreover, in relation to the introduction of the intra-day trading on the electricity trading, agreements on the joint allocation of the interconnection capacity in the same day shall be concluded with the Hungarian and Bulgarian TSO until the end of 2010.

From a technical point of view, the grid operators shall carry out the connection installations at high standards so that the curtailment of E-RES in the grid for technical reasons can be avoided to the greatest extent.

According to the amendments to Law 220/2008 approved in June 2010, the transmission and system operator and/or the distribution operators shall ensure the transmission and distribution as well as the priority dispatching of the electricity from renewable energy sources for all the producers of energy from renewable sources irrespective of the capacity, based on transparent and non-discriminatory criteria with the possibility of modifying the notifications during the operation day, according to the methodology established by ANRE within 90 days from the effective date of this law so that the limitation or the interruption of the production of energy from renewable sources can be applied only in exceptional cases if it is necessary for the stability and safety of the National Energy System.

The perspective plans on the grids development presented in Chapter 4.2.6 contain provisions related to the increase of the capacities of transmission and distribution lines (including the capacity of the interconnection lines with the systems of the neighbouring countries) and the increase in the use of improved communications and control instruments. Further information is presented in Chapter 4.2.6.

*d) Is the energy regulatory authority informed about these measures?
Does it have the competence to monitor and enforce implementation of these measures?*

Electricity Law 13/2007 confers important duties to the Romanian Energy Regulatory Authority. Inter alia, ANRE:

- shall establish obligatory regulations for the economic operators in the field of electricity;
- shall draw up and approves the calculation methodologies necessary for setting the regulated prices and tariffs; shall approve the regulated prices and tariffs;
- shall exercise control as regards the compliance with the issued regulations by the economic operators in the field of electricity and shall apply sanctions in case such regulations are not observed;
- shall collaborate with the regulatory authorities of the states from the region for the harmonisation of the regulatory framework with a view to developing the regional market, including the cross-border electricity exchanges and the rules on the management and allocation of the interconnection capacities.

The same law lays down ANRE's obligation to monitor the grid operators and, among the monitoring criteria, we specify the following:

- the duration for the carrying out of the connections to the transmission and distribution grid and the reconnection duration following repairs;
- the grid operators' publishing the adequate information on the interconnection capacities, the use of grid and allocated capacity;
- the terms, conditions and tariffs for the connection of new electricity producers in order to guarantee that such conditions and tariffs are objective, transparent and non-discriminatory, in particular taking into consideration the costs and benefits of the various RES technologies, the distributed production and the production of thermal energy in co-generation.
- the transparency and competition level regarding the operation of the electricity market.

- e) *Are plants generating electricity from renewable energy sources integrated in the electricity market? Could you please describe how? What are their obligations regarding participation in the electricity market?*

The E-RES producers can sell the electricity produced:

- through bilateral contracts concluded with the electricity suppliers or the eligible consumers, for negotiated prices or
- through bilateral contracts concluded with the implicit suppliers from the area where the E-RES production capacities are located for the price regulated by ANRE, or
- on the centralised electricity market for the next day (MND).

On selling E-RES on MND:

- E-RES is taken over with priority on the electricity market;
- the price received is the closing market price;
- in case E-RES is not taken over within a time limit (the production-consumption balance is obtained only from the bilateral electricity sale-purchase contracts concluded), the E-RES producer submits a physical notification on unbalance and receives the price set for such situations.

In order that E-RES is taken over with priority on MND and that regulated bilateral contracts are concluded, E-RES is qualified for priority production of electricity.

Pursuant to the Commercial Code, E-RES can be qualified for uncontrollable or controllable priority production.

Therefore, two types of priority production are established:

- Uncontrollable priority production consisting of the production units where the producer cannot actively manage the actual unit production with a view to ensuring the conformity with the scheduled production notified in advance.

This category includes:

- the production units using wind power, solar energy and other similar energy sources where the availability of the energy source is characterised by considerable fluctuations during the day and cannot be controlled by the producer conveniently;
- the hydro units along the water but only insofar as such units cannot or are not authorised to control the turbine flow rate in any way even during the day;
- the co-generation plants but only insofar as the actual electricity production is fully beyond the control of the party operating the co-generation plant and if the necessary thermal production cannot be forecast with sufficient accuracy.

- The controllable priority production consisting in the production of electricity by the production units which are not qualified for uncontrollable priority production.

This category includes the dispatching units and the hydro electrical plants with storage lakes or power plants that produce electricity using biomass.

Upon the E-RES producer's request, ANRE qualifies the former's production units for uncontrollable or controllable priority production and sends the qualification decision to the respective producer and EMO, TSO (in the case of dispatching units) and to the grid operator to which the units to be qualified for priority production are connected.

As regards E-RES sale on MND, the producers shall submit preliminary notifications to EMO, separately for each type of priority production.

The preliminary notifications shall be sent:

- at least one month before the following year and shall indicate the estimated production per each month of the following year;
- at least one week before the following month and shall indicate the estimated production per each week of the following month;
- at least three trading days prior to the following week and shall specify the estimated production per each day of the following week.

Following the verification of the preliminary notifications, EMO informs TSO on the aggregate quantity of the priority production in each licensed area and for each interval of time applicable for that period, separately for each type of priority production.

By 18:00 o'clock of the second trading day proceeding the delivery day, the participants in MND shall submit final notifications to EMO, separately for:

- each trading interval of the delivery day;
- each type of priority production;
- the aggregate priority production of all the production units represented by the respective participant in MND;
- each dispatching unit;
- each production unit with a capacity higher than a reference values established by TSO.

Following the verification of the final notifications, EMO shall send DO and TSO by 08:30 h, in the trading day preceding the delivery day, separately for each trading interval of the delivery day, information on the aggregate quantity of the priority production in each applicable interval from the relevant period of time, separately per each type of priority production.

The final notifications are binding for the producer that has submitted such notifications.

The participants in the MND registered for priority production shall communicate EMO, separately per each type of priority production, the electricity quantities traded through bilateral contracts.

C.N. Transelectrica S.A. contracts, from the producers holding co-generation units qualified for priority production, the capacities of such units as technological system services – slow tertiary power reserves.

The contract prices are differentiated per electricity production technologies and ensure, on an annual basis, the recovery of the fixed costs relevant to the capacities qualified for the priority production.

The electricity quantities notified as priority production and validated are taken over with priority by the wholesale electricity market.

For each producer, EMO sends TSO the difference between the priority production, offered on MND for the set prices and validated by EMO and the priority production actually traded on MND.

As regards the E-RES commercialisation through regulated contracts, the contracts between the E-RES producers and the implicit suppliers are concluded based on the framework contracts approved by ANRE's Order 25/2005 and 11/207 respectively depending on the type of priority production (either uncontrollable or controllable) for the prices established by Order 44/2007.

f) What are the rules for charging transmission and distribution tariffs to generators of electricity from renewable energy sources?

According to Law 220/2008, the transmission and distribution tariffs are non-discriminatory between the energy produced from RES and the power produced from

conventional energy sources. Such distribution tariffs are regulated by orders issued by ANRE.

The transmission tariffs shall be paid following the conclusion of a transmission contract and are not differentiated per types of clients. Such tariffs are established by the *Methodology on setting the tariffs for the electricity transmission service* approved by ANRE's Order 60/2007.

The electricity producers, including electricity from renewable energy sources, which have installed a capacity higher than 10 MW pay for the transmission service – inserting electricity in the grid.

The distribution tariffs are charged under the distribution contracts. Such tariffs are established according to the *Methodology on setting the tariffs for the electricity distribution service – Revision 1* approved by ANRE's Order 39/2007. The distribution tariffs are not differentiated per types of clients but only per voltage levels.

4.2.8. BIOGAS INTEGRATION INTO THE NATURAL GAS GRID

a) How is it ensured that the charging of transmission and distribution tariffs does not discriminate against gas from renewable energy sources?

The Gas Law 351/2004, as subsequently amended and supplemented, provides for the obligation of the natural gas distribution operators to ensure third parties access to the distribution systems on the basis of non-discrimination within the limits of the distribution capacities by complying with the technological conditions according to the specific regulations drawn up by ANRE.

The same law stipulates that the access of third parties to the national natural gas transmission and distribution system can be rejected if:

- the capacity is insufficient;
- there are no units/pipes, constituent parts of the systems to which the connection is to be made;
- access to the system can entail serious economic and/or financial difficulties as regards the respective regulated activity for the transmission/distribution operator to whom access is requested;
- the quality of gas to be introduced in the systems and/or deposits does not correspond to the requirements imposed by the regulations in force.

The operator refusing access due to lack of capacity or lack of constituent parts of the systems, to which the connection is to be made, is under the obligation to finance the necessary works if such works are justified from an economic point of view.

If the execution of the respective works is not economically justified for the operator, the applicant shall participate in quota share, in cooperation with the former, to the financing, provided that a contract is concluded by which the applicant agrees to the operator's taking over the units built into its patrimony.

The gas transmission and distribution represent regulated activities. The Regulatory Authority (ANRE) publishes the methodologies on drawing up the transmission and distribution tariffs, thus the entire activity being carried out in completely transparent conditions.

However, the Gas Law refers exclusively to the activities in the NG sector, LNG, CNGV and LPG. The entire primary and secondary legislation necessary for the carrying out of the activities in this sector was exclusively drawn up for such types of gas without including the biogas.

Supplementing the secondary legislation, the drawing up of technical norms and, finally, the actual initiation of certain projects would allow the connection of biogas production installation to the grid.

On the other hand, it must be noted that the biogas producers' interest in connecting the installations to the NG grid was relatively low. They prefer the use of biogas for electricity production for various reasons:

- at national level, the electricity grid is more developed than the natural gas grid and the connection conditions are usually much more advantageous in the first case;
- the electricity market is much more favourable for E-RES than the gas market; the biogas producers have the guarantee of selling the electricity produced and benefit from support through the obligatory shares system combined with the GC trading; if they wished to commercialise directly the biogas produced they would no longer benefit from similar advantages.

b) Has any assessment been carried out on the need to extend the gas grid infrastructure to facilitate the integration of gas from renewable sources? What is the result? If not, will there be such an assessment?

Taking into consideration the lack of a legislative and regulatory framework on the connection of the biogas production installations to the NG grid and the producers' low interest in such connection, no assessment has been carried out yet on the need to extend the NG grid infrastructure to facilitate the integration of gas from RES. Such assessment shall be carried out following the adoption of the respective legislative and regulatory framework.

c) Are technical rules on grid connection and connection tariffs for biogas published? Where are these rules published?

In Romania, there are no technical rules on the grid connection and connection tariffs for biogas. The supplementation and amendment of the Gas Law 351/2004 shall entail the development of the necessary secondary legislation.

4.2.9. District heating and cooling infrastructure development

(a) Please provide an assessment of the need for new district heating and cooling infrastructure using renewable energy sources and contributing to the 2020 target. Based on this assessment, are there plans to promote such infrastructures in the future? What are the expected contributions of large biomass, solar and geothermal facilities in the district heating and cooling systems?

The public thermal energy supply service in centralised system is part of the scope of the municipal services and consists of all the activities related to the thermal energy production, transmission, distribution and supply carried out at the level of the administrative and territorial units under the supervision, coordination and responsibility of the local public administration or the community development associations, as applicable, in order to ensure the necessary thermal energy for heating and preparation of hot water for consumption for the population, public institutions, socio-cultural units and economic operators.

The public thermal energy supply service in centralised system is provided by means of the specific technical and urban public infrastructure pertaining to the public or private domain of the local public administration or the community development association, which forms the centralised thermal energy supply system of the locality or of the community development association called CTESS.

Law 325/2006 on the public thermal energy supply service regulates the carrying out of the activities specific to public thermal energy supply services used for the heating and preparation of consumption hot water and for the production, transmission, distribution and supply of thermal energy in centralised system efficiently and at high standards with a view to using optimally the energy resources and to complying with the environmental protection norms.

In Romania, the thermal energy is supplied through centralised distribution systems from thermal power plants (TPP) and cogeneration power plants (CPP) which supply thermal energy for a city, an area of a city or a district. In recent years, the total heat consumption has slowly decreased by approximately 30% mainly due to the decrease of industrial consumption.

The heating subsector is the most neglected of the energy subsectors and the RES-based heating received the least attention at legislative level. The centralised district thermal energy and co-generation supply systems represent in Romania the most deficient energy sub-sector due to:

- the wear and obsolescence of the installations and equipment;
- the high total energy loss upon transmission and distribution between the source and buildings as well as due to the inappropriate thermal insulation of the existing housing stock;
- the insufficient financial resources for the operation, maintenance, rehabilitation and modernisation
- the complex social problems related to the affordability of the energy invoices.

At present, the number of households connected to centralised district heating systems represents 57.9% of the total number of urban households and 30.7% of the total number of households.

The best centralised heating systems (heating source – transmission – distribution – block of flats) have approximately 35% of heat loss and the least efficient have approximately 77% losses paid by both the final consumer and the social protection system. Such factors i.e. high production and distribution costs, decrease of service quality, increase of the energy invoice value led to homeowners' disconnecting from

the centralised heating system. This difficult situation of the centralised heating subsector from Romania had a very significant social impact.

According to the Ministry of Administration and Interior, the district heating infrastructure shall be subject to a rehabilitation and expansion process according to the local requirements.

In Romania, the development of the new RES-based district heating infrastructure is at an early stage. One of the few ample projects for the use of RES for district heating was “Rumegu• 2000” which was carried out in five Romanian localities (Vatra Dornei, Gheorghieni, Vl•hi•a, Huedin and Întors•tura Buz•ului). This project consisted in the use of biomass as fuel for the heat power plants from these cities and it demonstrated that the thermal energy production based on such resource is viable and economical.

In Romania it is also considered the possibility of using the geothermal energy – there are centralised thermal energy supply systems in N•dlac, Oradea, Beiu•, S•nmartin, Lovrin de Timi•, C•lim•ne•ti.

The RES contribution such as the forest biomass, the solar energy and the geothermal energy to the achievement of the objective of 24% in 2020 assumed through Directive 28/2009 shall focus both on the electricity production in the combined power and heating plants and by:

- using the biomass in separate heating systems in the rural areas;
- efficiently using the biomass for the production of thermal energy in separate stoves by replacing the classical stoves in the households from the rural area (which have low efficiency below 20%) with systems using modern technologies that have a higher efficiency, approximately 80%;
- using solar energy for the production of heating and domestic hot water for individual households, tourist units (tourism establishments, hotels), farms or for the public sector (kindergartens, schools, administrative offices etc.);
- using heating pumps for the heating production in residential or public buildings.

Approximately 80% of the thermoenergy units in CHP supplying the centralised heat supply systems from the Romanian cities were installed in the period 1970 – 1980 and at present, their useful life has expired and their performance is low.

The reduced efficiency of such capacities stems from the technology, the fuel used (in many cases lignite), the decrease in consumption (mainly for technological steam). Due to the high production and transmission costs, the heat distributed in the district heating systems is subsidised by the state.

Taking into consideration that the useful life has expired, the technical state and performances, in the period 2010-2030, units amounting to 2495 MW from the combined power and heating plant shall be dismantled as follows:

- In the period 2010 - 2015: - 305 MW operating on lignite
- 940 MW operating on natural gas and fuel oil
- In the period 2016 - 2020: - 100 MW operating on lignite
- 585 MW operating on natural gas and fuel oil
- In the period 2021 - 2030: - 565 MW operating on natural gas and fuel oil

The total CHP power fulfilling the conditions for dismantling by 2030 represents 72% of the power currently installed in such plants.

In order to maintain the heat supply capacity of the consumers connected to such systems and taking into account the new cogeneration technologies with combined-cycle or heat recovery gas turbines, approximately 1200 MW shall have to be installed.

It can be estimated that approximately 15%, i.e. approximately 200 MW of this power shall function based on biomass.

A great potential is the heat supply in the centralised systems from hot water boilers based on biomass.

If in 2006 more than 46 thousand tonnes/year were consumed for the delivery of heat from thermal power plants based on biomass, in 2020 a consumption of more than 100 thousand tonnes/year is expected to be reached.

As regards the use of geothermal energy, increases in its use for heating are expected in the tourist areas from Bihor, Timiș, Arad and Vâlcea Counties. In 2006, in these counties heat from geothermal sources was delivered both to the population – residential buildings – and to other consumers i.e. 131 thousand Gcal/year.

It is expected that by using the regulated aid schemes, this value shall double by 2020.

Actions are necessary in order to create/modernise installations and local heat distribution grids based on RES. It is also necessary to promote the technical projects for the construction of single family units that include measures/technologies for thermal insulation and centralised heating based on biomass.

In Romania, the following support schemes for the promotion of E-RES use can be employed (widely described in Chapter 4.3):

- Y The system of obligatory shares combined with GC trading – the scheme applies throughout the operation of a power plant and it provides for the granting of support to the producers delivering electricity from renewable sources (E-RES) to the public grids;
- Y The regional state aid scheme on the valuation of the renewable energy resources – the scheme applies in the investment stage and it provides for the granting of a non-refundable financial support from structural funds to economic operators (small, medium and large enterprises) during the implementation period of the project;
- Y The co-financing scheme without applying the state aid norms – the scheme applies in the investment stage and it provides for the granting of a non-refundable financial support from structural funds to the local public administration and intercommunity development associations during the implementation period of the project;
- Y The scheme offered by the “Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro” - the scheme ensures financial support by non-refundable co-financing from the Environmental Fund.

Table 4.3 presents the projects contracted from the first call for projects from structural funds (August-September 2008) within the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC), Priority Axis 4 (PA4) “Increasing energy efficiency and security of supply, in the context of combating climate change”, Major Intervention Field (MIF 2) “Improving the use of renewable energy resources for the production of green energy”.

Table 4.3. Projects contracted in the first call for projects SOP IEC - Axis 4

Type of resource	Type of applicant*	Number of projects	Installed power [MW _e and/or MW _t]	Energy produced [MWh _e and/or MWh _t]
Geothermal energy	LPA	1	44988.6 MW _t	51902.36 MWh _t
Biomass	EA	3	5.24 MW _e 5.102 MW _t	40622.09 MWh _e 40121.825 MWh _t
Total number	-	4	5.24 MW_e	40622.09 MWh_e

of projects approved			44,993.702 MW_t	92024.185 MWh_t
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Note: *EA- economic operators; LPA – local public authority

Source: Ministry of Economy, Commerce and Business Environment

4.2.10. Biofuels and other bioliquids — sustainability criteria and verification of compliance (Articles 17 to 21 of Directive 2009/28/EC)

- a) *How will the sustainability criteria for biofuels and bioliquids be implemented at national level? (Is there legislation planned for implementation? What will be the institutional setup?)*

By the end of 2010, the provisions of Articles 17 to 21 and the sustainability criteria for biofuels and bioliquids of Directive 2009/28/EC on the promotion of the use of energy from renewable sources shall be taken by Government Decision initiated by the Ministry of Economy, Commerce and Business Environment.

Based on the principle of social, economic and environment sustainability, the forests (forest lands) to be excluded from the use for the production of biofuels and bioliquids, shall fulfil at least one of the conditions below:

- they pertain to the natural fundamental type of forest (or close to such type) corresponding to the stationary conditions laid down by the technical norms in force;
- they are managed as high forest (as selection forest or even-aged high forest) up to the exploitation age corresponding to the technical norms in force;
- they are part of the category of forests located on degraded land (with previous use other than forest) existing within land improvement perimeters in the last 50 years;
- they are included in the category of forests with special environmental protection, socio-recreational or aesthetic functions (functional group 1).

The forest crops of the national forestry real estate, which could supply biomass for the production of biofuels and bioliquids, shall comply with the forestry norms (management by means of authorised forestry structures based on forest planning by complying with the technical norms etc.).

The bioenergy cultures of wood species located on agricultural land for the purpose of obtaining small-sized wooden products in a short period of time shall not fall within the above-mentioned provisions but such cultures shall be subject to the sustainability criteria applicable to such land use category.

Pursuant to Articles 35 to 37 of Law 46/2008 on the Forest Code, the change of use of the lands for forest purposes is restricted to a limited range of works of public interest and it is approved following a specific procedure.

The use for energy purposes (thermal energy and/or electricity) of the solid forest biomass resources both in primary form (e.g. wood harvested from the forest as primary or secondary products intended for use as fire wood) and secondary form (e.g. waste resulted from processing such as sawdust, either bulk or as briquette) is not subject to Article 17 of Directive 2009/28/EC but it can be calculated as contribution to the achievement of the target of 24% by 2020.

We consider that the forest norms in force, which are among the most developed norms (restrictive as regards the environmental issues) from Europe, are sufficient for the compliance with the general sustainability indicators for biomass used for energy purposes.

The floodplains from the dam-shore area intended for poplar and willow cultures or occupied by natural forest formations such as floodplain coppices are therefore excluded from the development of intensive bioenergy crops.

Since the major part of the protected natural areas is occupied by forest, it is necessary to analyse the relation between the forest regime (according to the technical norms and forest planning) and the protection regime established by the management plans of the

protected areas. In general, the forests located within the protected areas are included in the functional group I by means of forest planning.

- b) *How will it be ensured that biofuels and bioliquids that are counted towards the national renewable target, towards national renewable energy obligations and/or are eligible for financial support comply with the sustainability criteria set down in Article 17(2) to (5) of Directive 2009/28/EC? (Will there be a national institution/body responsible for monitoring/verifying compliance with the criteria?)*

The aim is that the legislative act to cover the provisions of Articles 17 to 21 from Directive 2009/28/EC on promotion of the use of energy from renewable sources shall stipulate:

- that the monitoring/verification of the compliance with the sustainability criteria for biofuels and bioliquids be carried out by third-party bodies acknowledged by the Ministry of Economy, Commerce and Business Environment;
- the obligation for the economic operators, that introduce biofuels and bioliquids on the market, to report the information on the compliance with the sustainability criteria for biofuels and bioliquids at the Ministry of Economy, Commerce and Business Environment.

- c) *If a national authority/body will monitor the fulfilment of the criteria, does such a national authority/body already exist? If so, please specify. If not, when is it envisaged to be established?*

For the monitoring/verification of the compliance with the sustainability criteria for biofuels and bioliquids, third-party bodies shall be designated, shall be acknowledged by the Ministry of Economy, Commerce and Business Environment and shall be established by the end of 2010. We expect that the accredited certification bodies for products shall request the acknowledgement of the authority for the monitoring/verification of the sustainability criteria for biomass.

- d) *Please provide information on the existence of national law on land zoning and national land register for verifying compliance with Article 17(3) to (5) of Directive 2009/28/EC. How economic operators can access to this information? (Please provide information on the existence of rules and distinction between different land statuses, like biodiversity area, protected area etc; and on the competent national authority who will monitor this land register and changes in land status.)*

The protected natural areas are regulated by Emergency Government Ordinance No 57/2007 on the status of protected natural areas, conservation of natural habitats, flora and wild fauna as subsequently supplemented and amended (Emergency Government Ordinance No 154/2008 amending and supplementing Emergency Government Ordinance No 57/2007 on the status of protected natural areas, conservation of natural habitats, flora and wild fauna and the Law on hunting and protection of fauna No 407/2006) and by the subsequent legislation.

The limits of the protected natural areas in Stereo 1970 projection can be found on the website of the Ministry of Environment and Forests at: http://www.mmediu.ro/protectia_naturii/protectia_naturii.htm.

In Romania, there are several categories of protected natural areas according to the Emergency Government Ordinance No 57/2007 on the status of protected natural areas, conservation of natural habitats, flora and wild fauna.

The designation of new protected natural areas of national interest shall be carried out according to the provisions of the Order of the Minister of Environment and Sustainable Development 1710/2007 approving the necessary documentation for the purpose of establishing the status of protected natural area of national interest.

The Environmental Protection Authorities ensure the public information on the obligations devolving on the authorities for the protection and conservation of the natural stock at national, regional and local level.

- e) *As far as protected areas are concerned, please provide information under which national, European or international protection regime they are classified.*

In 2005, Emergency Ordinance 195 consisting of provisions related to the nature conservation and protected areas, was adopted. It also acknowledges all the protected areas previously declared by any law, order, resolution and decision.

Therefore, the National Network of Protected Areas currently includes 579 protected areas (among which 13 national parks, 13 natural parks, 981 natural reservations and 28 special protection avifauna areas) representing 7.83% of the Romanian territory (1.866705 ha). Three of them are internationally acknowledged as Biosphere Reservations within UNESCO Programme, namely: Retezat National Park, Pietrosul Rodnei National Park and Danube Delta. The Danube Delta is also included in the list of the World Natural Patrimony and Ramsar List of the internationally important humid areas.

Of the 198 types of European habitats, of which 65 are priority habitats, in Romania there are 94 types of habitats of which 23 are priority habitats at Community level and the conservation of which requires the designation of Special Areas of Conservation (SAC) 273 SCI sites (proposals for Sites of Community Importance). The protection regime for such sites of Community interest was imposed at national level in accordance with the provisions of Emergency Government Ordinance No 57/2007 on the regime of protected natural areas, conservation of natural habitats, flora and wild fauna by means of the following normative acts:

- MMDD Order 1964/2007 establishing the regime of protected natural area of the Sites of Community Importance as integral part of the European Ecological Network Natura 2000;
- Government Decision 1284/2007 on the establishment of the special avifauna protection areas as integral part of the European Ecological Network Natura 2000. The range of the sites included in the European Network Natura 2000 covers approximately 17.84% of the national territory.

- f) *What is the procedure for changing the status of land? Who monitors and reports at national level on land status changes? How often is the land zoning register updated (monthly, annually, bi-annually, etc.)?*

The temporary or permanent use of certain agricultural and forest lands is carried out only under the conditions established by Law of Agricultural Real Estate 18/1991 as subsequently amended and supplemented.

The agricultural real estate and, as appropriate, the right of ownership and the other property rights shall be recorded in the land register and the land registry directory stipulated by law.

The management of the national domain of public interest is carried out by the local councils and halls or, as applicable, by prefectures.

The rezoning of land usage is carried out in accordance with the Law of Agricultural Real Estate 18/1991 and the Joint Order of the Minister of Agriculture, Forests and Rural Development and the Minister of Administration and Interior No 897/798/2005 approving the Regulation on the contents of the documentation on the rezoning of the land usage.

The layout requirements for constructions and the jurisdiction of the competent institutions for the approval of the rezoning of land usage are specified in Article 1 of the above-mentioned Regulation as follows:

1) The layout of any type of constructions shall be according to the Law of Agricultural Real Estate 18/1991, republished, as subsequently amended and supplemented, on lands located in the built-up area of the localities established pursuant to the law; exceptions to such conditions apply to the constructions specified in Article 91(2) and (3) of the above-mentioned law, which can be also set on lands located outside the built-up area of the localities, predominantly on the lands with non-agricultural or inferior use and low-productive complying with Article 92 of the same law.

2) The rezoning of land usage as provided for by Article 92(1) to (4), (6) and (7) and Article 93 - 103 of Law 18/1991, republished, as subsequently amended and supplemented, and by Law 50/1991 authorising the execution of the construction works as subsequently amended and supplemented, is carried out as following:

a) for areas of up to 1 ha, the permanent or temporary rezoning of the agricultural land usage without land improvements, without vine and fruit tree plantations and of III-V quality class shall be approved by decision of the Executive Director of the Directorate for Agriculture and Rural Development on the basis of the endorsement of the National Agency for Cadastre and Land Registration;

b) for areas from 1 to 100 ha, the permanent or temporary rezoning of the agricultural land usage without land improvements, without vine and fruit tree plantations and of III-V quality class shall be approved by the Ministry of Agriculture, Forests and Rural Development, and by decision of the of the Executive Director of the Directorate for Agriculture and Rural Development, on the basis of the endorsement of the National Agency for Cadastre and Land Registration;

c) for areas exceeding 100 ha, the approval for the rezoning of the land usage shall be granted by Government Decision with the Joint Endorsement of the Ministry of Agriculture, Forests and Rural Development and of the Ministry of Administration and Interior. The taxes corresponding to the improvement fund of the agricultural real estate shall be paid following the Government Decision;

d) the permanent rezoning of lands from outside the built-up area of quality class I and quality class II, of the lands with improvement works and the lands with vines and orchards from outside the built-up area by extending the built-up area shall be carried out based on urban studies (General Urban Plan or Local Urban Planning) proposed by the Local Councils by complying with the conditions on the contents of the documentation stipulated by Article 2(1); the approval shall be granted by Order of the Executive Director of the Directorate for Agriculture and Rural Development on the basis of the endorsement of the National Agency for Cadastre and Land Registration and of the Ministry of Agriculture, Forests and Rural Development through, as appropriate, the Directorate for Consolidation of Property, Reform of

Exploitation Structures and Conservation of Soils and/or through the Directorate General for Implementation of Sectoral and Market Policies, by paying the taxes laid down by the law;

3) The rezoning of land usage is carried out based on documentation drawn up according to the provisions of this Regulation.

4) The National Agency for Cadastre and Land Registration issues the endorsement in maximum 10 working days from the receipt of the complete documentation and the Directorate for Agriculture and Rural Development verifies and approves the documentation in maximum 10 working days from the receipt of the endorsement; the failure to comply with such deadlines constitutes a disciplinary deviation. The Agricultural Real Estate, by method of use, is presented in the Romanian Statistical Yearbook which is published on an annual basis.

g) How is compliance with good agro-environmental practices and other cross-compliance requirements (required by Article 17(6) of Directive 2009/28/EC) ensured and verified at national level?

The Good Agriculture and Environment Conditions (GAEC) were taken by the Joint Order of the Minister of Agriculture and Rural Development and Minister of Environment and Forestry No 30/147/2010 approving the good agricultural and environment conditions in Romania:

- The good agricultural and environment conditions are observed by all the farmers who request direct area payments, agri-environmental payments, support for less favoured areas, payments for the first afforestation of the agricultural lands, support for the restructuring/reconversion of vine plantations and bonuses for the elimination of vine plantations from European funds or the national budget.
- The good agricultural and environment conditions are observed on all the agricultural lots within the holding including on the non-eligible lots and on the lots which are not used for production purposes.

The Good Agriculture and Environment Conditions – GAEC in Romania – consist of standards for: prevention of soil erosion; maintenance of the optimum content of organic matter into the soil; maintenance of the soil structure; maintenance of a minimum upkeep level of the agricultural lands; water protection and management.

The Paying and Intervention Agency for Agriculture draws up the implementation procedures of the good agriculture and environment conditions, ensures the information of farmers on the conditions to be observed, carries out the control of its compliance by farmers and monitors the upkeep of the area of permanent pastures at national level.

h) Do you intend to help develop voluntary ‘certification’ scheme(s) for biofuel and bioliquid sustainability as described in the second subparagraph of Article 18(4) of Directive 2009/28/EC? If so, how?

For the obtaining of the biofuel and bioliquid quantities with a view to achieving the 2020 targets, we consider that the import of raw materials shall not be necessary because the biomass potential from Romania ensures the necessary quantity. For the biofuels and bioliquids originating from the EU Member States or from third party states, the respective batches shall have to be accompanied by certificates attesting the compliance with the sustainability criteria through the supply contracts.

4.3. Support schemes to promote the use of energy from renewable resources in electricity applied by Romania

In Romania, the following support schemes to promote the use of E-RES are used / can be used:

- A) The system of obligatory shares combined with GC trading; the scheme is applied throughout the operation of a power station and provides for the granting of support to the producers delivering E-RES to public networks for a period of maximum 15 years (new units). After 10 years, the scheme shall be re-notified to the European Commission.
- B1) The regional state aid scheme on the use of renewable energy sources; the scheme applies in the investment stage and provides for the granting of a non-refundable financial support from structural funds to the economic operators (small, medium and large enterprises) during the implementation period of the project.
- B2) The co-financing scheme without applying the state aid norms; the scheme applies in the investment stage and it provides for the granting of a non-refundable financial support from structural funds to the local public administration and intercommunity development associations during the implementation period of the project.
NB: Schemes B1 and B2 are integrated in Sectoral Operational Programme „Increase of Economic Competitiveness” (SOP IEC) - Axis 4: Increasing energy efficiency and security of supply, in the context of combating climate change DMI 2 - “Use of renewable energy sources for the production of green energy” and have numerous common features specific to the programme. On the other, there are important elements that differentiate such features so that they shall be presented below distinctly.
- C) The scheme offered by the “National programme for the increase of energy efficiency and use of renewable energy sources in the public sector for 2009-2010”
- D) The scheme offered by the “Programme on the production of energy from renewable energy sources: wind power, geothermal and solar energy, biomass and hydro-energy”

A) Obligatory shares system combined with GC trading

Regulation

a) *What is the legal basis for this obligation/target?*

- Government Decision 1892/2004 as subsequently amended and supplemented established the obligatory shares system combined with GC trading as support mechanism to promote the production of electricity from RES. The document contains provisions on the application method of such system.
- Law 220/2008 stipulates that the obligatory shares system combined with the trading of green certificates or “fixed price” system applies for the promotion of the production of electricity from renewable energy sources. The promotion of one of these systems shall be approved by Government Decision at the proposal of ANRE.

The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) no longer refers to the possibility of the “fixed price” system.

- The primary legislation for E-RES promotion was supplemented by a series of ANRE regulations:
 - By ANRE's Order 25/2004, the Commercial Code of Electricity Wholesale Market was approved and it establishes distinct commercialisation rules for electricity qualified for priority production, for E-RES and electricity produced in co-generation.
 - The Regulation for the qualification of the priority production of electricity from RES approved by ANRE's Order 39/2006.
 - ANRE's Order 44/2007 establishes the regulated price of 132 lei/MWh for which electricity produced from RES and which benefits from the support scheme through GC can be sold to the suppliers delivering electricity to the captive consumers; the respective suppliers are under the obligation to purchase such electricity. According to the above, the GC price shall be added to this amount.
 - By ANRE's Order 57/2008, the Methodology establishing the prices and the quantities of electricity sold by the producers on the basis of regulated contracts was approved;
 - By Order 22/2006, the Regulation of organisation and operation of the green certificates market was approved;
 - By ANRE's Order 38/2006, the procedure for the monitoring of GC market was approved;
 - By ANRE's Order 23/2004, the procedure for the supervision of the issuance of guarantees of origin for the electricity obtained from renewable energy sources was approved;
 - By ANRE's Order 45/2005, the first procedure for the allocation of the amounts resulted from the failure of the electricity suppliers to comply with the obligatory shares for the purchase of GC was approved; subsequently, this procedure was repealed and replaced with a new procedure approved by ANRE's Order 62/2009.

The regulatory framework presented above had an important role in stimulating the production of electricity from RES. The interval of time between the adoption of such documents and their effects was however longer than the initial estimated time. It was necessary that the investors had to carry out their own measurements on the RES potential in the selected locations, had to carry out their feasibility studies, had to purchase land and equipment etc. Thus, significant differences were recorded between the annual shares established by Government Decision 958/2005 and the actual production values in the respective years.

In order to accelerate the increase of E-RES production, the Romanian Parliament adopted Law 220/2008 establishing the system promoting the production of energy from renewable energy sources.

The law brings a series of amendment of the existing E-RES promoting system mainly related to:

- the period of applicability of the promotion scheme;
- the number of GC granted for 1 MWh of E-RES depending on the type of technology, the RES used etc.;
- commercialisation of E-RES;
- the method of allocating the amount collected from the suppliers that do not comply with the obligatory annual purchase share of GC.

At the end of 2009, ANRE submitted to CE-DG Competition (the Emergency Government Ordinance the Competition Council and the Permanent Representation of Romania at Brussels) a request for an informal opinion on the state aid character of the GC scheme contained in Law 220/2008.

Following the clarifications presented by ANRE for various issues raised, in March 2009 EC informed the Romanian authorities that the pre-notification stage was concluded and EC requested the submission of the notification documentation including the amendments adopted for the promotion scheme by amendments to Law 220/2008 approved in June 2010.

Taking into consideration that on the basis of such amendments, Chapter IX – “Facilities” of Law 220/2008 (in the initial form from 2008) was repealed entirely, Romania considers that all doubts on possible state aid measures for energy producers contained in the Law are eliminated. Therefore, the Law, in the amended form, does not contain state aid measures.

b) Are there any technology-specific targets?

- The RES Use Strategy is the first official document that presents medium and long term forecasts on the production of energy from RES and the volume of capacities to be achieved per technologies of use. Since such forecasts are presented in an official document and are the basis of the proposed measures, these forecasts were considered specific objectives. These initial objectives were subsequently amended in various stages and, at present, they only have a historic character.
- The legislative acts from the initial period (Government Decision 443/2003, Government Decision 1892/2004 and Government Decision 958/2005) did not lay down specific objectives for certain technologies but only common objectives.
- Law 220/2008, including the amendments from June 2010, does not lay down technology-specific objectives but introduces a differentiated support system per RES technologies.

c) What are the concrete obligations/targets per year (per technology)?

- The RES Use Strategy (approved by Government Decision 1535/2003) presents medium and long term forecasts per RES and RES use technologies on the production of energy from RES and the volume of capacities to be achieved. The respective values have been reassessed repeatedly and, at present, have a purely historical character.
- Government Decision 443/2003 promoting the production of electricity from renewable energy sources (amended by Government Decision 958/2005) sets forth that the share of electricity produced from RES in the national gross consumption of electricity is to reach 33% by 2010.
- The Programme of existing and planned measures for the promotion of production and consumption of electricity produced from RES approved by Government Decision 1395/2005 lays down the start-up of electricity production capacities from RES of 440 MW by 2010 and 790 MW for the period 2011-2015.
- Government Decision 1892/2004, as subsequently amended and supplemented, introduced the obligatory shares system combined with GC trading and approved the amount of such shares for the period 2005-2010. The respective values were increased by Government Decision 958/2005 and are presented in Table 4.4. These shares refer to the total electricity production from the following RES: hydro-electric energy produced in plants with an installed power lower or equal to

10 MW, started up or modernised as from 2004, wind power, solar energy, geothermal energy, biomass, wave energy and hydrogen produced from RES. These obligatory shares do not include electricity produced in hydro-electric power stations with a capacity higher than 10 MW.

- Considering the delays in making the investments and in order not to inflict penalties on the suppliers for GC unavailable on the market, the shares were amended annually by Orders of the President of ANRE, which was allowed by Government Decision 1892/2004 as subsequently amended and supplemented (Table 4.4).

Table 4.4

Year	Share established by Government Decision 958/2005 (%)	Final share established by ANRE's Order (%)
2005	0.7	2.65% of 0.7% (ANRE's Order 46/2005)
2006	2.22	2.38% of 2.22% (ANRE's Order No 37/2006)
2007	3.74	2.62% of 3.74 % (ANRE's Order 63/2007)
2008	5.26	0.316 (ANRE's Order 127/2008)
2009	6.78	0.589 (ANRE's Order 97/2009)
2010	8.3	

- Law 220/2008 stipulated that:
 - the level of the national targets on the share of electricity produced from renewable energy sources in the final electricity consumption in view of 2010, 2015 and 2020 is respectively 33%, 35% and 38%. As regards the attainment of such targets, the electricity produced in hydro-electric power stations with installed powers higher than 10 MW is also taken into consideration.
 - The annual obligatory shares of green certificates for the period 2008-2020 are presented in Table 4.5.

Table 4.5

Year	Annual obligatory share according to Law 220/2008 (%)	Annual obligatory share according to the Law amending and supplementing Law 220/2008 (%)
2008	5.26	
2009	6.28	
2010	8.30	8.3
2011	8.30	10.0
2012	8.30	12.0
2013	9.00	14.0
2014	10.00	15.0
2015	10.80	16.0
2016	12.00	17.0
2017	13.20	18.0
2018	14.40	19.0
2019	15.60	19.5
2020	16.80	20

The annual obligatory shares of green certificates for the period 2021-2030 shall be established by the line ministry and shall not be lower than the share established for 2020.

ANRE establishes the annual obligatory purchase share of green certificates estimated for the following year, the number of green certificates estimated to be issued based on the information related to the electricity estimated to be produced from renewable energy sources for the following year and the estimated final energy consumption. This share is adjusted at the end of each year on the basis of the actual production realised and the number of GC issued.

The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) increases the annual obligatory shares initially established. The new values are presented in Table 4.5.

d) Who has to fulfil the obligation?

The electricity suppliers are under the obligation to purchase GC adequate for the fulfilment of the annual obligatory shares laid down by law.

e) What is the consequence of non-fulfilment?

- Law 220/2008 establishes that the value of the penalty which the electricity supplier must pay in case of failure to fulfil the obligatory share is 70 Euro/non-purchased certificate.

The amount resulted from penalties shall be collected by TSO and is annually collected by ANRE, on the basis of transparent and objective criteria, for investments with a view to enabling the access of producers of energy from renewable sources to the transmission/distribution grid.

- The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) increases the value of penalty to 110 Euro/non-purchased certificate. The amount resulted from penalties shall be collected by TSO and shall constitute revenue to the Environmental Fund with a view to financing the production of energy from RES by natural persons that invest in energy capacities with an installed power of up to 100 kW.

f) Is there any mechanism to supervise fulfilment?

The monitoring of the development and operation of the green certificates market is one of the main duties of ANRE. The monitoring procedures are established by secondary legislative acts made public. ANRE publishes annual reports on the operation of such market on its website.

g) Is there any mechanism to modify obligations/targets?

- Government Decision 1892/2004 establishes that the annual obligatory shares can be modified at the beginning of each year by Order of the President of ANRE depending on the evolution of the internal electricity consumption.
- Government Decision 958/2005 limits in time the possibility of modifying the share on annual basis by ANRE's Order to the period 2005-2007 and specifies that such amendment can be made when the capacity installed in the plants producing electricity from renewable energy sources cannot ensure the demand of green certificates.

- Government Decision 1538/2008 extends for 2008-2009 the period in which the annual shares established by Government Decision 958/2005 can be amended by Order of ANRE. The provision according to which such amendment is made when the capacity installed in the plants producing electricity from renewable energy sources cannot ensure the demand of green certificates is maintained.
- Law 220/2008 stipulates that if within two consecutive years, the level of annual obligatory shares is not reached, the Government shall take measures to stimulate investments with a view to complying with the law.
- Law 220/2008 stipulates that ANRE establish the annual obligatory purchase share of green certificates estimated for the following year, the number of green certificates estimated to be issued based on the information on electricity estimated to be produced from renewable energy sources for the following year and the final estimated energy consumption. This share is adjusted at the end of each year on the basis of the actual production realised and the number of GC issued.

Financial support:

a) What is the name and a short description of the scheme?

- The current scheme promoting E-RES production is the obligatory shares system combined with the GC trading. The scheme is applicable to electricity produced from the following RES: hydro energy used in power plants with an installed power of maximum 10 MW, wind power, solar energy, geothermal energy and similar fuel gas, biomass, biogas, landfill gas, mud fermentation gas from the used waters treatment installations, and which is delivered in the electricity grid.
- The producer of electricity from renewable energy sources that benefits from the promotion system presented ensures its revenues from:
 - i) the sale of the electricity produced on the electricity market;
 - ii) the sale of green certificates on the green certificates market.
- i) E-RES produced by the producers that benefit from the promotion system presented, is commercialised on the electricity wholesale market:
 - by bilateral contracts concluded with the electricity suppliers or eligible consumers for negotiated prices, or
 - by bilateral contracts concluded with implicit suppliers from the area where the E-RES production capacities are located for a price regulated by ANRE, or
 - on the centralised electricity market for the next day (MND).

The secondary legislation drawn up by ANRE for the application of Government Decision 1892/2004, as subsequently amended and supplemented, stipulates that the producers owning production units qualified for priority production and that benefit from the support scheme through GC can sell energy at regulated price to implicit suppliers from the area where the production capacities are located; the implicit suppliers are under the obligation to purchase E-RES produced by the station located in the their licence area; at present, according to ANRE's Order 44/2007, this regulated price is 132 lei/MWh (approximately 32 Euro/MWh); the validity of these provisions shall cease upon the entry into force of the promotion system instituted by Law 220/2008 and Government Decision 1479/2009 and the amendments to Law 220/2008 approved in 2010, and after the European Commission authorised this system.

Government Decision 1479/2009 stipulates that, following the entry into force of the new system, the E-RES producers shall sell electricity produced on the electricity market at the market price and the producers of E-RES in plants with installed powers below 1 MW shall opt for trading such energy either at regulated price or negotiated price. Within 60 days from that date, ANRE shall draw up the methodology for the calculation of the regulated price.

The producers that opt only for E-RES trading at regulated price are exempt from the payment of the unbalances caused if they comply, cumulatively, the following conditions:

- electricity is produced in plants with installed powers of maximum 0.25 MW per location;
 - the renewable sources used are: wind power, solar energy or hydro energy;
 - ii) Distinctly, the producers commercialise GC on the GC competition exchange organised by OPCOM at a price that must range between the limits established by law. At present, according to Law 220/2008, these limits are respectively 27 Euro/MWh and 55 Euro/MWh. Taking into consideration the unbalance between the (high) demand and (low) offer of GC, the price is close to the maximum value. Therefore, the average closing price of the green certificates market was 53.146 Euro/GC for 2009.
- TRANSELECTRICA issues GC on the basis of the minutes signed with the grid operators attesting the quantity of E-RES produced and delivered to the grid.
 - OPCOM organises the centralised GC market (different from the energy market) and publishes reports on the operation of this market.
 - ANRE issues the necessary regulations and monitors the GC market operation.
 - At the end of 2009, ANRE submitted to DG Competition (through the Competition Council) a request for an informal opinion on the differentiated allocation mechanism of GC proposed by Law 220. If DG Competition considers such mechanism as state aid, the scheme shall be notified and then, it is necessary to be officially approved by the Commission.
- Until the Commission's authorisation decision is received, Law 220/2008 shall only be applied partially, in the sense that the differentiated issuance of GC per technologies is not applied. The support mechanism is the above-mentioned mechanism established by Government Decision 1892/2004.
- However, the provisions amending the minimum and maximum limits of GC value, namely 27-55 Euro/GC, shall apply.

b) Is it a voluntary or obligatory scheme?

The scheme is obligatory.

c) Who manages the scheme?

- The distribution operators are under the obligation to submit to the E-RES producers information on E-RES taken from the former.
- The transmission and system operator, Transelectrica:
 - i) issues GC to producers (corresponding to the green energy delivered to the grid);
 - ii) communicates the list of producers and GC received by each producer to ANRE;

- iii) invoices and collects the amounts originating from the suppliers that have not fulfilled their obligatory share in a separate account; distributes such amounts according to the regulations in force and ANRE decisions.
- OPCOM as organiser of the centralised GC market and administrator of the GC market:
 - i) registers the participants in the GC market;
 - ii) forecasts on an annual basis and makes public the demand and offer of GC at national level;
 - iii) registers the bilateral contracts concluded between the producers and suppliers, the number of GC and the numeric codes of the GC traded monthly necessary for the validation of the offers on the centralised GC market;
 - iv) draws up and keeps up to date the GC Register;
 - v) ensures the receipt, validation and processing of the GC sale/purchase tenders from the participants in the centralised GC market;
 - vi) establishes and makes public the number of GC traded monthly on the centralised GC market;
 - vii) establishes and makes public the closing price of the centralised GC market;
 - viii) establishes the rights and payment obligations of the participants in the centralised GC market;
 - ix) on a monthly basis, submits the information on the transactions made and the trading prices on the centralised GC market to ANRE.
- ANRE draws up the secondary legislation norms and monitors the development and operation of the GC market. The specific activities were presented above.

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The financing of the obligatory shares system combined with GC trading is incurred by the final consumer. It is therefore ensures the availability of the necessary budget/funding to achieve the national target. On setting the value of the obligatory shares, the legislator's aim is that the scheme be incurred by the final consumer taking into consideration its effect on the general price level of electricity and the consumers' payment capacity.

e) How is long-term security and reliability addressed by the scheme?

The legislation in force (Government Decision 443/2003, Law 220/2008) stipulates that the grid operators are under the obligation to guarantee the transmission and distribution of electricity produced from RES without jeopardising the reliability and safety of the grids.

It implicitly results that, following the granting of the technical notice of connection, TSO and DO assumes the responsibility for the operation of the grids in conditions of security and reliability. In 2008, TRANSELECTRICA drew up a Substantiation Study on the company's strategy related to the integration of wind power plants into the

national energy system. The study analyses the functional features of the wind power plants and their implications on the national energy system. Inter alia, it shows that:

- The wind power generation requires that additional power be installed in the system capable of ensuring the fast tertiary reserve.
- Taking into consideration the notices issued so far and the volume of its reserves, CNTEE Transelectrica S.A. is obliged to approve the inclusion in NES/connection to ETG of the wind power plants conditionally until the method of ensuring the adequate reserve is determined.

f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The obligatory shares scheme combined with GC trading was introduced in Romania in 2004 (by Government Decision 1892/2004) and it still is in force.

By Government Decision 958/2005, the values of the obligatory shares for the period 2005-2010 were amended; the new values are presented in Table 4.1.

However, the legislation allowed ANRE to amend the annual value of the obligatory share in the first ten-day period of December if the capacity installed in the plants producing electricity from renewable energy sources cannot ensure the demand of green certificates (Government Decision 958/2005 for the period 2005-2007 and Government Decision 1538/2008 for the period 2008-2009).

In practice, every year ANRE had to revise the initial shares and the final values are presented in Table 4.5.

As a result of the significant differences between the initial values and the final values of the obligatory shares, Law 220/2008 was drawn up and approved together with the amendments approved in 2010. The Law brings important changes in the application of the support scheme introducing distinctions in the number of GC issued per type of technologies. Such changes are not yet applicable in the conditions presented above (point a). The Law also increased the minimum and maximum trading values of GC and specifies that such values shall be adjusted annually with the consumption price index for Romania. If within 2 consecutive years, the level of the annual obligatory targets is not attained, the Government shall take measures in order to stimulate the investments with a view to complying with the provisions of this Law.

By means of the amendments to Law 220/2008 approved in 2010, the number of GC was changed and additionally differentiated per types of sources and the minimum and maximum trading values of GC is annually indexed by ANRE according to the average inflation index registered in the month of December of the previous year calculated at EU 27 level (officially communicated by EUROSTAT). After 2025, the trading value of the green certificates shall be established by the green certificates market but it cannot be lower than the minimum trading value applied in 2025 indexed annually in the conditions of the above paragraph.

g) Does support differ according to technology?

- i) The legislation prior to Law 220/2008 does not stipulate the granting of support function of the RES technology used.
- ii) Law 220/2008 introduces a differentiated support per RES technologies both in terms of the number of allocated GC and of the support period. From the point of view of the number of GC for each 1 MWh electricity delivered to the grid and/or consumers:
 - the hydro-electric power plants of maximum 10 MW either started up or retrofitted after 1 January 2004 receive 1 GC;

- the hydro-electric power plants of maximum 10 MW, other than the plants specified above, receive 0.5 GC;
- the hydro-electric power plants with a capacity lower than 1 MW receive 2 GC;
- the wind power plants receive 2 GC until 2015 and 1 GC as from 2016;
- the power plants using geothermal energy, biomass, biogas, bioliquids, landfill gas, similar gas receive 3 GC;
- the photovoltaic power plants receive 4 GC.

The amendments to Law 220/2008 approved in the Chamber of Deputies in 2010 lay down the following:

a) for electricity from hydro-electric power plants with installed powers of maximum 10 MW:

(i) 3 green certificates for each 1 MWh produced and delivered if the hydro-electric power plants are new;

(ii) 2 green certificates for each 1 MWh produced and delivered if the hydro-electric power plants are retrofitted;

b) 1 green certificate for each 2 MWh from the hydro-electric power plants with installed power of maximum 10 MW, which do not fall within the conditions stipulated in (a);

c) 2 green certificates, until 2017, and 1 green certificate, as from 2018, for each 1 MWh produced and delivered by the producers of electricity from wind energy;

d) 3 green certificates for each 1 MWh produced and delivered by the producers of electricity from the sources specified in Art. 3(1) (d) – (i);

e) 6 green certificates for each 1 MWh produced and delivered by the producers of electricity from solar energy.

h) What are the expected impacts in terms of energy production?

The presented scheme shall have an important contribution to the achievement of the quantitative targets regarding the E-RES share in the total electricity consumption.

The current forecasts show that such scheme, completed by the support schemes for investments, shall lead to an E-RES production, in 2020, of 32.1 TWh which is practically equal to the value forecast in the Energy Strategy of Romania for the period 2007-2020 (Table 1.6).

The support measures taken shall therefore combat the effects of the current economic crisis on the E-RES production and internal consumption.

On the other hand, the forecasts indicate that due to the current economic crisis, the internal electricity gross consumption shall 73.6 TWh in 2020 (in comparison with 85 TWh forecast in the Energy Strategy of Romania for the period 2007-2020).

Therefore, the total E-RES share in the internal electricity gross consumption shall be 43.5% in 2020.

i) Is support conditional on meeting energy efficiency criteria?

The application of the obligatory shares scheme and green certificates is not conditional on meeting energy efficiency criteria. However, Law 220/2008 distinguishes between second hand equipment (considered to have a limited efficiency) and new/retrofitted equipment as regards the duration of the application of the support scheme.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

The current support mechanism promoting the renewable energy sources is an already existing measure in accordance with the indicated legislation: Government Decision 443/2003, Government Decision 1892/2004, Government Decision 958/2005, Law 220/2008, Government Decision 1479/2009 and the amendments to Law 220/2008 approved by the Parliament in 2010.

k) Is this a planned scheme? When would it be operational?

Law 220/2008 with the amendments approved by Parliament in 2010 shall be effective after the new system has been notified to the European Commission.

Taking into consideration that by virtue of the Law, Chapter IX – “Facilities” of Law 220/2008 (in the initial form from 2008) was repealed entirely, Romania considers that all doubts on possible state aid measures for energy producers contained in the Law are eliminated. Therefore, we consider that the Law, in the amended form, does not contain state aid measures.

l) What start and end dates (duration) are set for the whole scheme?

- The support mechanism established in accordance with Government Decision 1892/2004, amended and supplemented by Government Decision 958/2005 (in force) covers the period 2005-2012.
- Law 220/2008 stipulates that the set promotion system shall apply per different periods function of the RES technology as follows:
 - 15 years for electricity produced in new electrical units
 - 5 years for electricity produced in wind power units/plants from import, which have been used before for the production of electricity on the territory of other states;
 - 10 years, for electricity produced in hydro-electric power plants/units of maximum 10MW, retrofitted
 - 3 years, for electricity produced in hydro-electric power plants/units of maximum 10MW, not retrofitted.

The promotion system shall apply from the date when the producers start producing electricity and receive green certificates if the power plants/units are brought on stream and retrofitted by the end of 2014.

The amendments to Law 220/2008 approved by the Chamber of Deputies in 2010 change such data and lay down that the promotion system shall apply for a period of:

a) 15 years, for electricity produced according to paragraph (1), in new electric units/ power plants;

b) 10 years, for electricity produced in the units of hydro-electric power plants with an installed power of maximum 10 MW, retrofitted;

c) 7 years, for electricity produced in units/power plants, which have been used for the production of electricity on the territory of other states if they are used in isolated power systems or have been brought on stream before the effective date of this law but not older than 10 years and compliant with the environmental protection norms;

d) 3 years, for electricity produced in hydro-electric units/power plants with an installed power of maximum 10 MW, not retrofitted.

Likewise, the date until when investments can be made is changed so that they benefit from the promotion system from *the end of 2014 to the end of 2016*.

m) Are there maximum or minimum sizes of system which are eligible?

The promotion system shall apply to the systems producing electricity from renewable sources irrespective of size except for the hydro-electric power plants which must have a maximum capacity of 10MW in order to benefit from such support.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

At present, the system presented above is the only one offering support to producers in the operational stage (during the operation of a power plant producing E-RES). The projects on the production of electricity from renewable sources can benefit from support in the investment stage through the schemes which are to be presented below.

o) Are there regional/local schemes? If so, please detail using the same criteria.

The regional state aid scheme (scheme B1) on the use of renewable energy resources aims at granting support in the investment stage, is a regional scheme and applies to all the developing regions of Romania.

Specific questions for financial support for investment

a) Is there an obliged share of electricity produced from renewable sources in the total supply?

The support mechanism refers to the introduction of obligatory shares of green certificates (representing the equivalent of energy produced from renewable sources) expressed in percentages of internal gross consumption of electricity which the suppliers must purchase on an annual basis. By means of the amendments of Law 220/2008 approved by the Parliament in 2010, the annual share of electricity produced from renewable sources is clarified and differentiated from the obligatory annual purchase share of GC applicable to suppliers.

b) Who can benefit from this scheme?

The electricity suppliers are under the obligation to purchase GC adequate for the fulfilment of the annual obligatory shares laid down by law.

c) Are there technology-specific bands?

- The legislation prior to Law 220/2008, namely Government Decision 1892/2004 as subsequently amended and supplemented, does not stipulate the granting of support function of the RES technology used. The established support mechanism covers the period 2005-2012.
- Law 220/2008 introduces a differentiated support mechanism per RES technologies as indicated below:

- new or retrofitted hydro-electric power plants of maximum 10 MW – 1 GC for 1 MWh
- hydro-electric power plants other than the power plants specified above of maximum 10MW – 1 GC for 2MWh
- hydro-electric power plants with capacities lower than 1MW – 2GC for 1MWh
- wind power plants – 2 GC for 1MWh until 2015 and 1GC for 1MWh as from 2016
- geothermal (electric), biomass, biogas, bioliquids, landfill gas, similar gas – 3 GC for 1MWh
- photovoltaic – 4 GC for 1MWh

In addition, this Law stipulates that the promotion system shall apply for a different period function of the RES technology as follows:

- 15 years for electricity produced in new electrical units
 - 5 years for electricity produced in wind power units/plants from import, which have been used before for the production of electricity on the territory of other states;
 - 10 years, for electricity produced in hydro-electric power plants /units of maximum 10MW, retrofitted;
 - 3 years, for electricity produced in hydro-electric power plants/units of maximum 10MW, not retrofitted.
- The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) changes the number of green certificates allocated function of the technology used as follows:
 - three green certificates for each 1 MWh produced and delivered by new hydro-electric power plants with maximum installed capacities of 10 MW;
 - two green certificates for each 1 MWh produced and delivered by retrofitted hydro-electric power plants with maximum installed capacities of 10 MW;
 - one green certificate for each 2 MWh from hydro-electric power plants with a maximum installed power of 10 MW, which does not fall within the previous conditions;
 - two green certificates until 2017 and one green certificate as from 2018 for each 1 MWh produced and delivered by the producers of electricity from wind power;
 - three green certificates for each 1 MWh produced and delivered by the producers of electricity from geothermal energy, biomass, bioliquids, biogas, gas resulted from waste processing and mud fermentation;
 - six green certificates for each 1 MWh produced and delivered by the producers of electricity from solar energy.

The promotion system modified by the amendments from 2010 shall apply for a period of:

- a) 15 years, for electricity produced according to paragraph (1), in new electric units/ power plants;
- b) 10 years, for electricity produced in the units of hydro-electric power plants with an installed power of maximum 10 MW, retrofitted;
- c) 7 years, for electricity produced in units/power plants, which have been used for the production of electricity on the territory of other states if they are used in isolated power systems or have been started up before the effective date of this law but not older than 10 years and compliant with the environmental protection norms;
- d) 3 years, for electricity produced in hydro-electric units/power plants with an installed power of maximum 10 MW, not retrofitted.

The isolated power systems shall also benefit from the green certificates promotion systems regulated by the law.

For the high efficiency electricity produced in cogeneration in power plants using geothermal energy, biomass, bioliquids, biogas, gas resulted from waste processing and mud fermentation, in addition to the above provisions, a green certificate is granted for each 1MWh produced and delivered.

The promotion system shall be applicable to the producers qualifies by ANRE from the date when they start producing electricity and receive green certificates if the start-ups and the retrofitting of the units/power plants are carried out by the end of 2016.

d) Which technologies are covered by the scheme?

- The support scheme instituted by Government Decision 1892/2004, as subsequently amended and supplemented, shall apply for the electricity produced from the following RES: hydro-electric energy produced in power plants with an installed power lower or equal to 10 MW, started up or modernised as from 2004, wind power, solar power, geothermal power, biomass, wave power, and hydrogen produced from RES.
- Law 220/2008 stipulates the use of a system promoting energy produced from: hydro energy used in power plants with an installed power of maximum 10 MW, wind power, solar energy, geothermal energy and similar fuel gas, biomass, biogas, landfill gas, mud fermentation gas from the used waters treatment installations, and which is delivered in the electricity grid,
- The amendments to Law 220/2008 approved by the Chamber of Deputies in 2010 stipulate that the promotion system of the electricity from renewable energy sources shall apply for the electricity delivered to the electricity grid and/or consumers, produced from:
 - a) hydraulic energy used in plants with an installed power of maximum 10 MW;
 - b) wind power;
 - c) solar energy;
 - d) geothermal energy;
 - e) biomass;
 - f) bioliquids;
 - g) biogas;
 - h) gas resulted from waste processing;
 - i) mud fermentation gas from the used wasters treatment plants.

e) Is international trade in certificates allowed? What are the conditions?

- The legislation in force (Government Decision 1892/2004, as subsequently amended and supplemented) does not stipulate international trade of green certificates.
- Law 220/2008 introduces this possibility provided that a European System of Green Certificates is established and Romania adheres to such system. Thus, the electricity suppliers can fulfil the obligatory purchase share of green certificates both on the internal market and on the European green certificates market. The producers of electricity from renewable sources can trade green certificates on European green certificates market in the conditions established by ANRE. Green

certificates can be traded only on the internal green certificates market until the national targets are attained.

- By the amendments to Law 220/2008 approved by the Chamber of Deputies in June 2010, certain provisions of Directive 2009/28/EC on the possibility of certain agreements with EU Member States related to statistical transfers of electricity quantities were transposed.

f) Is there a floor bottom price?

- Law 220/2008 lays down the minimum and maximum trading values of green certificates at respectively 27 Euro/certificate and 55 Euro/certificate calculated at the average exchange values established by the National Bank of Romania for the month of December of the previous year.
- By the amendments of Law 220/2008 approved by the Parliament in June 2010, the minimum and maximum trading values of GC shall be indexed annually by ANRE according to the average inflation index recorded in the month of December of the previous year, calculated at EU 27 level and communicated officially by EUROSTAT. After 2025, the trading value of the green certificates shall be established by the green certificates market but it cannot be lower than the minimum trading value applied in 2025 indexed annually in the conditions of the above paragraph.

g) Is there a penalty for non-fulfilment?

- Law 220/2008 establishes that the value of the penalty which the electricity supplier must pay in case of failure to fulfil the obligatory share is 70 Euro/non-purchased certificate.
The law specifies that the amount resulted from penalties shall be collected by the transmission and system operator and is annually allocated by ANRE, on the basis of transparent and objective criteria, for investments with a view to enabling the access of producers of energy from renewable sources to the transmission/distribution grid.
- The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) increases the value of penalty to 110 Euro/non-purchased certificate. The amount resulted from penalties shall be collected by TSO and shall constitute revenue to the Environmental Fund with a view to financing the production of energy from RES by natural persons that invest in energy capacities with an installed power of up to 100 kW.
ANRE shall supervise that such obligation is fulfilled.

h) What is the average price for certificates? Is it made public? Where?

The closing price of the green certificates market shall be published on the OPCOM website on a monthly basis.

For 2009, the average closing price of the green certificates market was 211,798 RON/certificate (53.146 Euro/certificate at the exchange rate of December 2008 published by NBR, namely 3.9852 RON/Euro).

i) What is the trading scheme for certificates?

The trading scheme for green certificates has been described above.

j) How long can a plant participate in the scheme?

- Law 220/2008 stipulates that the promotion system shall apply for a different period function of the RES technology as follows:
 - 15 years for electricity produced in new electrical units;
 - 5 years for electricity produced in wind power units/plants from import, which have been used before for the production of electricity on the territory of other states;
 - 10 years, for electricity produced in hydro-electric power plants/units of maximum 10MW, retrofitted;
 - 3 years, for electricity produced in hydro-electric power plants/units of maximum 10MW, not retrofitted

The promotion system shall be applicable to the producers qualified by ANRE from the date when they start producing electricity and receive green certificates provided that the start-ups and the retrofitting of the units/power plants are carried out by the end of 2014. This time limit was extended until 2016 by the amendments of Law 220/2008 approved in 2010 as the investors' forecast intentions until 2014 did not ensure the achievement of the annual shares.

- The Law amending and supplementing Law 220/2008 (voted by the Parliament and submitted for promulgation) establishes that the promotion system shall apply for a period of:
 - 15 years, for electricity produced according in new electric units/ power plants;
 - 10 years, for electricity produced in the units of hydro-electric power plants with an installed power of maximum 10 MW, retrofitted;
 - 7 years, for electricity produced in units/power plants, which have been used for the production of electricity on the territory of other states if they are used in isolated power systems or have been started up before the effective date of this law but not older than 10 years and compliant with the environmental protection norms;
 - 3 years, for electricity produced in hydro-electric units/power plants with an installed power of maximum 10 MW, not retrofitted.

The promotion system shall be applicable to the producers qualified by ANRE from the date when they start producing electricity and receive green certificates if the start-ups and the retrofitting are carried out by the end of 2016.

B1) Regional state aid scheme on the use of renewable energy resources

Regulation

a) What is the legal basis for this obligation/target?

- **Community legislation (selective list)**
 - Regulation (EC) No 1083/2006 laying down the general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund, and repealing Regulation (EC) No 1260/1999 as subsequently amended;
 - Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999;
 - Commission Regulation No 1828/2006 setting out rules for the implementation of Council Regulation (EC) No 1083/2006 laying down general provisions on

the European Regional Development Fund, the European Social Fund and the Cohesion Fund and of Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund, as subsequently amended;

- Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation);
- EC Decision No 702/21 October 2006 on the Community's strategic guidelines related to cohesion;
- Directive 2004/18/EC of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, as subsequently amended and supplemented;
- Directive 2004/17/EC of the European Parliament and of the Council coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, as subsequently amended and supplemented;
- Council Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities;
- Commission Regulation (EC) No 1628/2006 on the application of Articles 87 and 88 of the Treaty to national regional investment aid, as subsequently amended and supplemented;
- Commission Decision C(2007) 3.472 of 12 July 2007 approving the Sectoral Operational Programme "Increase of Economic Competitiveness";
- Decision N 2/07 approving the national regional state aid map for 2007-2013 published in OJ C 73 of 30 March 2007.

- **National legislation (selective list)**

- Government Decision 79/2003 on the control and recovery of Community funds and of the co-financing funds used inadequately published in the Official Journal;
- Emergency Government Ordinance 34/2006 on awarding public procurement contracts, works concession contracts and services concession contracts, as subsequently amended and supplemented;
- Emergency Government Ordinance 64/2009 on the financial management of the structural instruments and their use for the convergence objective;
- Government Decision 925/2006 approving the application norms of the provisions on the awarding of public procurement contracts of Emergency Government Ordinance No 34/2006 on awarding public procurement contracts, works concession contracts and services concession contracts, as subsequently amended and supplemented;
- Government Decision 651/2006 approving the policy in the field of state aid for the period 2006-2013;
- Government Decision 759/2007 on the eligibility rules of the expenses made within the operations financed through the operational programmes, as subsequently amended and supplemented, published in the Official Journal of Romania No 517 of 1 August 2007;
- Government Decision 1.306/2007 approving the methodological norms for the application of Government Ordinance 79/2003 on the control and recovery of Community funds and of the relevant co-financing funds used inadequately;

- Government Decision 457/2008 on the institutional framework for the coordination and management of structural instruments;
- Government Decision 1720/2008 on the organisation and operation of the Ministry of Economy, as subsequently amended and supplemented;;
- Government Decision 750/2008 approving the “Regional state aid scheme on the use of renewable energy resources”;
- Order 273/2008 of the Minister of Economy and Finances on the delegation of duties from MA SOP IEC to the Intermediary Energy Body;
- Order 2228/22 July 2008 of the Minister of Economy and Finances approving the List of eligible expenses for the projects financed within Major Intervention Field 4.2 “Use of renewable energy resources for the green energy production” of Priority Axis 4 “Increasing energy efficiency and security of supply, in the context of combating climate change” of the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC) 2007-2013;
- Order 2548/2009 of the Minister of Public Finances approving the Methodological Norms for the application of Emergency Government Ordinance 64/2009 on the financial management of the structural instruments and their use for the convergence objective;

b) Are there any technology-specific targets?

The scheme finances the investments of economic operators (small, medium and large enterprises) for the construction and modernisation of the electricity and thermal power production by using the renewable energy resources: biomass, micro-hydro energy (installed power < 10MW), solar energy, wind power, geothermal energy, biofuels. This scheme finances only the projects providing for the execution of initial investments.

Specific objectives are not laid down for a certain technology.

c) What are the concrete obligations/targets per year (per technology)?

As regards the projects for the production of energy by **combustion (cogeneration or separate production of electricity or thermal energy)**, the energy contents of the primary fuel used annually must be in proportion of minimum 80% of renewable resources. The cogeneration projects can be financed provided that more than 40% of the energy (electricity and thermal energy) produced annually is intended for sale. The production of biofuel is eligible provided that such activity is carried out in order to produce energy within the same project.

There are also concrete obligations / objectives which refer to the applicants/beneficiaries, eligible expenses etc.

The Applicant's Guide drawn up by IEB and displayed at <http://oie.minind.ro> lays down in depth the conditions for granting the co-financing and the obligations of the beneficiaries.

After the co-financing has been obtained, the beneficiaries are under the obligation to fulfil the conditions of the financing contract.

d) Who has to fulfil the obligation?

The beneficiaries of the scheme are under the obligation to fulfil the legal conditions on the basis of which they benefited from support and which are specified in the financing contracts.

e) What is the consequence of non-fulfilment?

The failure to fulfil the obligations assumed by the beneficiary entails the recovery of the unjustified payments.

f) Is there any mechanism to supervise fulfilment?

IEB ensures the prevention and identification of irregularities, their recording and reporting, acknowledgement and recovery of unjustified amounts in accordance with the duties performed on the basis of the agreement concluded with the Managing Authority of SOP IEC complying with the internal procedures and legislative norms in the field.

g) Is there any mechanism to modify obligations/targets?

The obligations established by the concluded contract and specified in the "Applicant's Guide" cannot be amended.

Financial support:

a) What is the name and a short description of the scheme?

Name of scheme: Regional state aid scheme on the use of renewable energy resources.

The financing of the projects on the production of energy from RES from structural funds is carried out within the Sectoral Operational Programme "Increase of Economic Competitiveness" (SOP IEC) - Axis 4 "Increasing energy efficiency and security of supply, in the context of combating climate change, MIF 2 "Use of renewable energy resources for the green energy production".

The maximum value of the non-refundable support which can be granted for a project as percentage of the eligible expenses is the following:

- § for **small enterprises and micro-enterprises: 70%**, except for the projects located in the Bucharest - Ilfov region where the maximum value is 60%;
- § for **medium enterprises: 60%**, except for the projects located in the Bucharest - Ilfov region where the maximum value is 50%;
- § for **large enterprises: 50%**, except for the projects located in the Bucharest - Ilfov region where the maximum value is 40%.

The difference to the total value of the project shall be covered by the beneficiary. The latter shall bring a financial contribution of at least 30% of eligible costs, either from its own resources or from enlisted sources under a form not subject to any public aid.

The beneficiary shall also incur, aside from own contribution to the eligible costs of the projects, the non-eligible costs. Beneficiaries shall also ensure the full financing of the investment expenses for the implementation of the project until the co-financing is reimbursed.

As regards the projects for the production of energy by **combustion (cogeneration or separate production of electricity or thermal energy)**, the energy contents of the primary fuel used annually must be in proportion of minimum 80% of renewable

resources. The cogeneration projects can be financed provided that more than 40% of the energy (electricity and thermal energy) produced annually is intended for sale. The production of biofuel is eligible provided that such activity is carried out in order to produce energy within the same project.

The implementation procedure and development of the scheme are carried out as follows:

- i) launching the call for proposals of projects;
- ii) receipt and registration of the financing application;
- iii) verification of the administrative conformity and eligibility of the projects and beneficiaries; only the projects that pass this stage shall be subject to the following stage; submitting to the beneficiary the agreement in principle that the scheme eligibility conditions are fulfilled;
- iv) technical and financial evaluation of the projects;
- v) project selection;
- vi) drawing up and signing the financing contract;
- vii) carrying out the projects and reimbursement of expenses: payments shall be carried out by the POS IEC Payment Unit only on the basis of supporting documents following the approval of the reimbursement application; in the event that the beneficiary opts for pre-financing, it shall be granted in accordance with the legal provisions;
- viii) carrying out the monitoring during the execution of the projects;
- ix) completion of projects: the final payment shall be carried out on the basis of the documentation presented in accordance with the contractual provisions;
- x) carrying out the monitoring following the implementation of the projects for a 5-year period in the case of large enterprises and for a 3-year period in the case of SMEs.

b) Is it a voluntary or obligatory scheme?

The scheme is obligatory.

c) Who manages the scheme? (Implementing body, monitoring authority)

SOP IEC is monitored for its entire duration of implementation by a Monitoring Committee established according to Government Decision 1227/2007. The Committee consists of representatives of various ministries and government agencies, employers' associations and trade unions, academic environment as well as representatives of the civil society.

The Managing Authority of SOP IEC operates within the Ministry of Finances.

The financing scheme in question is integrated in SOP IEC, Axis 4 – Energy, MIF – “Use of renewable energy resources for the green energy production” and it is implemented and monitored by the Ministry of Economy, Commerce and Business Environment (MECBE) - DGEOG – IEB.

The main duties of IEB are the following:

- it draws up the Applicant's Guide and launches “call for proposals of projects”;
- it participates in the drawing up of the National Reference Strategic Framework of the Sectoral Operational Programme “Increase of Economic

Competitiveness” and the Framework Implementation Document in accordance with the National Development Plan, the chapters on the energy sector;

- it organises committees for project selection;
- it participates in project select in accordance with the procedures approved;
- it records the calls for proposals of projects and analyses the conformity of the documents filed by the applicants with the requirements laid down by IEB;
- it proposes changes of the Sectoral Operational Programme “Increase of Economic Competitiveness” and the Framework Implementation Document and submits to the Managing Authority the proposals for the reallocation of funds within Priority Axis IV of the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC);
- ensures the prevention and identification of irregularities, their recording and registration, acknowledgement and recovery of the unjustified amounts paid in accordance with the duties performed under the agreement concluded with the Managing Authority of POS IEC by complying with the internal procedures and the legislative regulations in the field.

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The estimated total budget allocated to the scheme is 200 200.000.000 Euro (equivalent in lei) of which 88% represents non-refundable European funds ensured by the European Regional Development Fund and the remaining 12% represents public co-financing funds ensured by the state budget and it is broken down per years as follows:

Table 4.6 Estimated total budget of the scheme

Year	Total (Community Funds and national public funds)
2008	20.9
2009	30.6
2010	39.7
2011	41.4
2012	35.8
2013	31.6

The financial operations shall be carried out in accordance with the “Instructions on the opening and operation of accounts for the management of non-refundable financial assistance and the funds from the state budget with the convergence objective” approved by Order of the Minister of Economy and Finances No 80/2008.

e) How is long-term security and reliability addressed by the scheme?

In the event that the project presupposes the connection to the electricity grid of public interest, the applicant is under the obligation to file the technical notice of connection for the place of production issued by TSO or DO.

Law 220/2008 stipulates that:

- the producers of electricity from renewable energy sources have priority access to the transmission/distribution electricity grid insofar as the security of the National Energy System is not affected;

- TSO and DO are under the obligation to guarantee the E-RES transmission and the distribution ensuring the reliability and security of the electricity grids.

It implicitly results that, after granting the technical notice of connection to grid, TSO and DO takes responsibility for the operation of the grid in conditions of security and reliability.

According to the amendments to Law 220/2008 approved in June 2010, TSO and/or DO shall ensure the transmission and distribution as well as the priority dispatching of the electricity produced from renewable energy sources for all the producers of energy from renewable sources irrespective of the capacity, based on transparent and non-discriminatory criteria with the possibility of modifying the notifications during the operation day so that the limitation or the interruption of the production of energy from renewable sources can be applied only in exceptional cases if it is necessary for the stability and safety of the NES.

f) Is the scheme periodically revised? What kind of feedback or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme was drawn up in accordance with the EU legislation in the field and its principles cannot be amended by the internal legislation. Detail amendments/revisions can be carried out in applying the scheme and can cover:

- the reallocation of funds within Priority Axis IV of POS IEC (which also impacts the implementation of the scheme in question);
- the improvement of the project selection criteria etc.

Such amendments shall be initiated by IEB and proposed to the Managing Authority of SOP IEC.

g) Does support differ according to technology?

Support does not differ according to the technology used.

h) What are the expected impacts in terms of energy production?

The presented scheme shall have an important contribution to the achievement of the quantitative targets regarding the E-RES share in the total electricity consumption.

The current forecasts show that the full application of the scheme and the start-up of plants thus built shall lead to an E-RES production of approximately 800 GWh and a thermal energy production from RES of approximately 200 GWh.

i) Is support conditional on meeting energy efficiency criteria?

The cogeneration projects can be financed provided that they only aim at high-efficiency cogeneration. For the other projects, support is not explicitly conditioned on the compliance with energy efficiency criteria but can be granted with a view to building new plants which are considered to have high-efficiency.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is already an existing measure regulated by the Community legislation and by the national legislation. The main regulatory act regulating the application of the scheme is Government Decision 750/2008 approving the Regional State Aid Scheme on the use of renewable energy resources.

k) Is this a planned scheme? When would it be operational?

The scheme was approved in 2007 and became operational in 2008. Following the competition organised in 2008, 12 projects financed through the Regional State Aid on the use of renewable energy resources were selected and contracted (Table 4.7).

Table 4.7

Type of resource	Number of projects	Installed power (MW _e and/or MW _t)	Energy produced MWh _e or/and MWh _t	Total value of projects (with VAT) -lei	Total value of the approved financing-lei
Hydroelectric	6	10.7365	67,155.45 MWh _e	176,152,507.85	58,424,121.59
Biomass	3	5.24 electric 5.102 thermal	40,622.09 MWh _e 40,121.825 MWh _t	113,330,847.83	51,854,154
Wind power	3	44	119.674 MWh _e	297,159,637	131,546,477
Total no. of projects approved	12	59.9765 MW_e 5.102 MW_t	227,451.54 MWh_e 40,121.825 MWh_t	586,642,992.68	241,824,752.59

l) What start and end dates (duration) are set for the whole scheme?

The scheme became operational in 2008, when the first call for projects was published. The scheme shall apply until 31 December 2013.

m) Are there maximum or minimum sizes of system which are eligible?

The scheme shall apply to projects having a total value ranging from 100,000 Euro (VAT included) to 50 million Euro (VAT included).

When the co-financing of a project was decided on the basis of an estimate with a total value below 50 million Euro but during the implementation of the project, for objective reasons which cannot be attributed to the beneficiary, the total costs exceed this limit, the non-refundable financing shall be suspended and the European Commission shall receive the documents stipulated by Regulation No 1828/2006, Annexes XXI or XXII with a view to obtaining the financing decision.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

In order that a project be eligible, it is necessary that its activities shouldn't have been financed and shouldn't have been financed from other public funds except for the preliminary studies (the pre-feasibility study, the geo-topographic analysis, the

potential evaluation study, the feasibility study, the technical project, the detailed design etc.).

The beneficiary shall assume the obligation not to receive financing from other public sources for the same eligible expenses of the project under the sanction of termination of the financing contract and return the amounts already reimbursed.

After the completion of the investment and its start-up, the producer can benefit from the support granted by the obligatory share system combined with GC trading described above.

o) Are there regional/local schemes? If so, please detail using the same criteria.

The scheme described is a regional scheme and shall apply in all the 8 development regions of the country.

Specific questions for financial support for investment:

a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)?

The support scheme presented consists in granting a non-refundable financing from structural funds with a view to making investments. The following expenses are considered as eligible:

- The expenses for the land purchase;
- The expenses for land management with a view to preparing the location if they are strictly related to the carrying out of the project;
- The expenses for the basic investment complying with the character of initial investment.

b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The state aid scheme is intended for economic operators, large, medium and small enterprises from all economic sectors (except for the case laid down in the following paragraph) that carry out initial investments in any of the 8 development regions of Romania. Within this scheme, the following sectors shall not receive financial support:

- i) fishing and aquafarming
- ii) ship construction;
- iii) coal industry;
- iv) steel industry;
- v) synthetic fibre sector;
- vi) activities related to the primary production of agricultural products laid down in Annex No 1 of the Treaty Establishing the European Community;
- vii) processing and marketing of agricultural products including the products imitating or replacing milk or milk products;
- viii) real estate development (promotion);
- ix) production of weaponry and ammunition and production of combat vehicles.

The beneficiaries shall also comply with the following conditions:

- are registered as trading companies in Romania according to the legislation in force;
- are not in difficulty in accordance with the Guidelines on State Aid for saving and restructuring the enterprises in difficulty;
- have no debts to the state as regards the payment of taxes and other contributions to the state budget, social security budget, special budgets and local budgets;
- demonstrate that they hold the necessary financial resources for the implementation of the project;
- must justify the need to finance the project through state aid;
- also comply with other conditions specified in the call for proposals of projects and Applicant's Guide.

The enterprises requesting the aid shall have recorded in the Company's Articles of incorporation the activity on the production of electricity/thermal energy; this shall be demonstrated through the Confirmation of Company's Details from the Trade Register.

The scheme is valid for the use of any renewable energy resource; it is not a special scheme for a certain type of technology.

c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The call for proposals of projects within SOP IEC – Axis 4 is “open with deadline” (the financing applications shall be filed by the deadline published in the call for proposals of projects). After the deadline for filing the financing application has expired, it is possible to file financing applications only following the publication of a new call for proposals of projects by the Intermediary Energy Body.

During this programming period (2007-2013), two calls for projects have taken place so far: the first one in August – September 2008 and the second call in January – April 2010.

B2) Co-financing scheme without applying the state aid rules

Regulation

a) What is the legal basis for this obligation/target?

• Community legislation (selective list)

- Regulation (EC) No 1083/2006 laying down the general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund, and repealing Regulation (EC) No 1260/1999 as subsequently amended;
- Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999;
- Commission Regulation No 1828/2006 setting out rules for the implementation of Council Regulation (EC) No 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and of Regulation (EC) No 1080/2006 of the European

Parliament and of the Council on the European Regional Development Fund, as subsequently amended;

- Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation);
- EC Decision No 702/21 October 2006 on the Community's strategic guidelines related to cohesion;
- Directive 2004/18/EC of the European Parliament and of the Council on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, as subsequently amended and supplemented;
- Directive 2004/17/EC of the European Parliament and of the Council coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, as subsequently amended and supplemented;
- Council Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities;
- Commission Regulation (EC) No 1628/2006 on the application of Articles 87 and 88 of the Treaty to national regional investment aid, as subsequently amended and supplemented;
- Commission Decision C(2007) 3.472 of 12 July 2007 approving the Sectoral Operational Programme "Increase of Economic Competitiveness";
- Decision N 2/07 approving the national regional state aid map for 2007-2013 published in OJ C 73 of 30 March 2007.

• **National legislation (selective list)**

- Law No 51/2006 on municipal services;
- Government Decision 79/2003 on the control and recovery of Community funds and of the relevant co-financing funds used inadequately published in the Official Journal;
- Emergency Government Ordinance 34/2006 on awarding public procurement contracts, works concession contracts and services concession contracts, as subsequently amended and supplemented;
- Emergency Government Ordinance 64/2009 on the financial management of the structural instruments and their use for the convergence objective;
- Government Decision 925/2006 approving the application norms of the provisions on the awarding of public procurement contracts of Emergency Government Ordinance No 34/2006 on awarding public procurement contracts, works concession contracts and services concession contracts, as subsequently amended and supplemented;
- Government Decision 651/2006 approving the policy in the field of state aid for the period 2006-2013;
- Government Decision 759/2007 on the eligibility rules of the expenses made within the operations financed through the operational programmes, as subsequently amended and supplemented, published in the Official Journal of Romania No 517 of 1 August 2007;
- Government Decision 1227/2007 approving the establishment of the Monitoring Committee of SOP IEC;
- Government Decision 1.306/2007 approving the methodological norms for the application of Government Ordinance 79/2003 on the control and recovery of Community funds and of the relevant co-financing funds used inadequately;

- Government Decision 457/2008 on the institutional framework for the coordination and management of structural instruments;
- Government Decision 1720/2008 on the organisation and operation of the Ministry of Economy, as subsequently amended and supplemented;
- Order 273/2008 of the Minister of Economy and Finances on the delegation of duties from MA SOP IEC to the Intermediary Energy Body;
- Order 2228/22 July 2008 of the Minister of Economy and Finances approving the List of eligible expenses for the projects financed within Major Intervention Field 4.2 “Use of renewable energy resources for the green energy production” of Priority Axis 4 “Increasing energy efficiency and security of supply, in the context of combating climate change” of the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC) 2007-2013;
- Order 2548/2009 of the Minister of Public Finances approving the Methodological Norms for the application of Emergency Government Ordinance 64/2009 on the financial management of the structural instruments and their use for the convergence objective”.

b) Are there any technology-specific targets?

The scheme finances investments of the local authorities and intercommunity development associations for the construction and modernisation of the electricity and thermal energy production capacities by using RES with a view to providing a public service (in the case of thermal energy) or for own consumption (including public lighting and public institutions). Within this scheme, only the projects for initial investments can be financed. The projects which represent simple replacement or rehabilitation investments of certain existing assets are not admitted.

All projects (irrespective if the technology used) shall have their economic efficiency demonstrated through feasibility studies.

Specific objectives for a certain technology are not stipulated.

Certain technologies (the combustion processes, the cogeneration, the biofuel production) shall fulfil certain conditions in order that the respective projects to be eligible.

c) What are the concrete obligations/targets per year (per technology)?

As regards the projects for the production of energy by **combustion (cogeneration or separate production of electricity or thermal energy)**, the energy contents of the primary fuel used annually must be in proportion of minimum 80% of renewable resources. The production of biofuel is eligible provided that such activity is carried out in order to produce energy within the same project.

There are also concrete obligations / objectives which refer to the financing criteria and conditions. Distinction is made between the financing conditions granted for electricity plants (including cogeneration) which must fall within the category “which do not generate revenues” and thermal energy production plants.

The Applicant’s Guide drawn up by IEB and displayed at <http://oie.minind.ro> lays down in depth the conditions for granting the co-financing and the obligations of the beneficiaries.

After the co-financing has been obtained, the beneficiaries are under the obligation to fulfil the conditions of the financing contract.

d) Who has to fulfil the obligation?

The beneficiaries of the scheme are under the obligation to fulfil the legal conditions on the basis of which they benefited from support and which are specified in the financing contracts.

e) What is the consequence of non-fulfilment?

The failure to fulfil the obligations assumed by the beneficiary entails the recovery of the unjustified payments.

f) Is there any mechanism to supervise fulfilment?

IEB ensures the prevention and identification of irregularities, their recording and reporting, acknowledgement and recovery of unjustified amounts in accordance with the duties performed on the basis of the agreement concluded with the Managing Authority of SOP IEC complying with the internal procedures and legislative norms in the field.

g) Is there any mechanism to modify obligations/targets?

The obligations established by the concluded contract and specified in the "Applicant's Guide" cannot be amended.

Financial support:

a) What is the name and a short description of the scheme?

Name of scheme: Co-financing scheme without applying the state aid rules

The financing of the projects on the production of energy from RES from structural funds is carried out within the Sectoral Operational Programme "Increase of Economic Competitiveness" (SOP IEC) - Axis 4: Increase of energy efficiency and supply safety, in the context of fighting climate change, MIF 2 – "Use of renewable energy resources for the green energy production".

The projects with investment cost below 1 million Euro shall not fall within the category "revenue generating projects" within the meaning of Article 55 of Regulation (EC) No 1083/2006 as subsequently amended and completed in order to obtain financing. The non-refundable financing share granted to such projects is 98% of the total eligible cost of the project.

The projects with investment cost above 1 million Euro are, as applicable:

§ **revenue generating projects**

In this case, the value of the eligible expenses cannot exceed the updated cost value of the investment of which the updated value of the net revenues obtained as a result of the exploitation of investment throughout the reference period is deducted. In other words, the project co-financing level shall be established on the basis of the financing deficit ("funding-gap"). The projects that aim at the execution of thermal energy production plants as public utility service fall within this category.

§ **non-revenue generating projects**

As regards such projects, the non-refundable financing share granted is 98% of the total eligible cost of the project.

The electricity production projects (including the combined power and heating plants) shall fall within the category of ***non-revenue generating projects***. This category includes the projects aiming at the production of electricity for:

- own consumption of the institutions providing services of public interest or general economic interest and for which the local authority incurs the payment of the consumed electricity from own budget;
- public lighting.

From the perspective of the relations with public grids, the following possibilities are allowed:

- The electricity produced is not introduced in the public grids.
- The electricity produced is introduced in the public grids by complying with the following conditions:
 - When operating the project, the producer shall not produce annually more electricity than it consumes and shall not earn revenues from the sale of the electricity sold. The transit of energy through the grid shall be carried out by applying the compensating system in physical units (kwh).
 - The applicant (local authority) shall be the owner of the investment, shall operate the investment and shall not transfer such activity to any economic operator.

The implementation procedure and development of the scheme are carried out as follows:

- i) launching the call for proposals of projects;
- ii) receipt and registration of the financing application;
- iii) verification of the administrative conformity and eligibility of the projects and beneficiaries; only the projects that pass this stage shall be subject to the following stage; submitting to the beneficiary the agreement in principle that the scheme eligibility conditions are fulfilled;
- iv) technical and financial evaluation of the projects;
- v) project selection;
- vi) drawing up and signing the financing contract;
- vii) carrying out the projects and reimbursement of expenses: payments shall be carried out by the POS IEC Payment Unit only on the basis of supporting documents following the approval of the reimbursement application; in the event that the beneficiary opts for pre-financing, it shall be granted in accordance with the legal provisions;
- viii) carrying out the monitoring during the execution of the projects;
- ix) completion of projects: the final payment shall be carried out on the basis of the documentation presented in accordance with the contractual provisions;
- x) carrying out the monitoring following the implementation of the projects.

b) Is it a voluntary or obligatory scheme?

The scheme is obligatory.

c) Who manages the scheme? (Implementing body, monitoring authority)

SOP IEC is monitored for its entire duration of implementation by a Monitoring Committee established according to Government Decision 1227/2007. The Committee consists in representatives of various ministries and government agencies, employers' associations and trade unions, academic environment as well as representatives of the civil society.

The Managing Authority of SOP IEC operates within the Ministry of Finances.

The financing scheme in question is integrated in SOP IEC, Axis 4 – Energy, MIF – “Use of renewable energy resources for the green energy production” and it is implemented and monitored by the Ministry of Economy, Commerce and Business Environment (MECBE) - DGEOG – IEB.

The main duties of IEB are the following:

- it draws up the Applicant's Guide and launches “call for proposals of projects”;
- it participates in the drawing up of the National Reference Strategic Framework of the Sectoral Operational Programme “Increase of Economic Competitiveness” and the Framework Implementation Document in accordance with the National Development Plan, the chapters on the energy sector;
- it organises committees for project selection;
- it participates in project select in accordance with the procedures approved;
- it records the calls for proposals of projects and analyses the conformity of the documents filed by the applicants with the requirements laid down by IEB;
- it proposes changes of the Sectoral Operational Programme “Increase of Economic Competitiveness” and the Framework Implementation Document and submits to the Managing Authority the proposals for the reallocation of funds within Priority Axis IV of the Sectoral Operational Programme “Increase of Economic Competitiveness” (SOP IEC);
- it ensures the prevention and identification of irregularities, their recording and registration, acknowledgement and recovery of the unjustified amounts paid in accordance with the duties performed under the agreement concluded with the Managing Authority of POS IEC by complying with the internal procedures and the legislative regulations in the field

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The necessary funds for the application of the scheme are allocated from the funds of SOP IEC.

e) How is long-term security and reliability addressed by the scheme?

In the event that the project presupposes the connection to the electricity grid of public interest, the applicant is under the obligation to file the technical notice of connection for the place of production issued by TSO or DO.

Law 220/2008 stipulates that:

- The producers of electricity from renewable energy sources have priority access to the transmission/distribution electricity grid insofar as the security of the National Energy System is not affected;
- TSO and DO are under the obligation to guarantee the E-RES transmission and the distribution ensuring the reliability and security of the electricity grids.

It implicitly results that, after granting the technical notice of connection to grid, TSO and DO takes responsibility for the operation of the grid in conditions of security and reliability

f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme was drawn up in accordance with the EU legislation in the field and its principles cannot be amended by the internal legislation. Detail amendments/revisions can be carried out in applying the scheme and can cover:

- the reallocation of funds within Priority Axis IV of POS IEC (which also impacts the implementation of the scheme in question);
- the improvement of the project selection criteria etc.

Such amendments shall be initiated by IEB and proposed to the Managing Authority of SOP IEC.

g) Does support differ according to technology?

Support does not differ according to the technology used, but function of other criteria.

The projects related to the execution of thermal energy production plants as public utility service with a total investment cost above 1 million Euro and which generate revenues, shall be granted support based on the determination of the financing deficit ("funding-gap").

For the projects related to the execution of electricity production plants (including combined power and heating plants) the non-refundable financing share is 98% of the total eligible investment cost. However, such projects must not generate revenues.

h) What are the expected impacts in terms of energy production?

The scheme shall have an important impact on the production of thermal energy produced as public utility (including combined power and heating plants). The estimated impact on the production of electricity shall be lower (since the electricity produced cannot benefit from the support of obligatory share system combined with the GC trading).

The current forecasts show that the full application of the scheme and the start-up of plants thus financed shall lead to an E-RES production of approximately 1 GWh and a thermal energy production from RES of approximately 200 GWh.

i) Is support conditional on meeting energy efficiency criteria?

The cogeneration projects can be financed provided that they only aim at high-efficiency cogeneration. For the other projects, support is not explicitly conditioned on the compliance with energy efficiency criteria but can be granted with a view to building new plants which are considered to have high-efficiency.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an already existing measure regulated by the Community legislation and the national legislation.

k) Is this a planned scheme? When would it be operational?

The scheme was approved in 2007 and became operational in 2008. Following the competition organised in 2008, 2 projects financed through the Co-financing Scheme without applying the state aid rules were selected and contracted (Table 4.8).

Table 4.8

Type of resource	Number of projects	Installed power (MW _e and/or MW _t)	Energy produced MWh _e or/and MWh _t	Total value of projects (VAT included)-lei	Total value of approved financing-lei
geothermal	1	44,988.6 thermal	51,902.36 MWh _t	16,686,889.9	13,740,648
Photovoltaic	1	0.257	307MWh _e	8,868,552.43	6,185,629
Total no. of approved projects	2	0.257 MW_e 44,988.6 MW_t	307 MWh_e 51,902.36 MWh_t	25,555,442.33	19,926,277

l) What start and end dates (duration) are set for the whole scheme?

The scheme became operational in 2008, when the first call for projects was published. The scheme shall apply until 31 December 2013.

m) Are there maximum or minimum sizes of system which are eligible?

The scheme shall apply to projects having a total value ranging from 400,000 Euro (VAT included) to 50 million Euro (VAT included).

When the co-financing of a project was decided on the basis of an estimate with a total value below 50 million Euro but during the implementation of the project, for objective reasons which cannot be attributed to the beneficiary, the total costs exceed this limit, the non-refundable financing shall be suspended and the European Commission shall receive the documents stipulated by Regulation No 1828/2006, Annexes XXI or XXII with a view to obtaining the financing decision.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

In order that a project be eligible, it is necessary that its activities should not have been financed and should not have been financed from other public funds except for the preliminary studies (the pre-feasibility study, the geo-topographic analysis, the potential evaluation study, the feasibility study, the technical project, the detailed design etc.).

The beneficiary shall assume the obligation not to receive financing from other public sources for the same eligible expenses of the project under the sanction of termination of the financing contract and of returning the amounts already reimbursed.

The electricity producer cannot benefit from the support granted by the obligatory share system combined with GC trading described above after the completion of the investment and its start-up.

o) Are there regional/local schemes? If so, please detail using the same criteria.

The scheme described is a regional scheme and shall apply in all the 8 development regions of the country.

Specific questions for financial support for investment:

a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)?

The presented support scheme consists in granting non-refundable financing from structural funds for the carrying-out of investments. The following expenses shall be eligible:

- i) Expenses for land purchase and other expenses for the obtaining of land;
- ii) Land management expenses;
- iii) Land management expenses for environmental protection;
- iv) Expenses for ensuring the necessary utilities of the target;
- v) Design and technical assistance expenses (within the limit of 10% of the total eligible expenses of the project);
- vi) Expenses for the basic investment;
- vii) Site management;
- viii) Payment of certain legal taxes: the tax corresponding to the Construction State Inspectorate for the quality control of construction works, tax for state control of territory management, urban planning and authorisation of construction works, the tax relevant to the Builders' Social Fund;
- ix) Technological trials and tests;
- x) Real estate information and registration according to the obligation laid down by the financing contract;
- xi) Project audit;
- xii) Project management.

b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The following categories of applications shall, under the scheme conditions, benefit from the co-financing:

- Local public administrations
- Intercommunity development associations

In the event that an applicant provides thermal energy production, transmission, distribution and supply in centralised system as public utility service, it is mandatory that the management of the respective service be performed directly or be delegated to certain operators by public tender.

Only the following are eligible for financing:

- projects for thermal energy production as public utility service or for own consumption of the public institutions financed from the budget of local public authorities;
 - projects for electricity production (or from combined power and heating plants) which **do not aim at introducing in NES** the electricity produced (for own consumption of all the institutions and authorities providing public interest services or services of general economic interest for which a local public authority incurs the payment of the electricity consumed and public lighting from own budget);
 - projects for electricity production (including combined power and heating plants) for own consumption, which **aim at introducing in NES** the electricity produced by complying the following conditions:
 - i) When operating the project, the electricity production shall not be charged to the users and earnings shall not be gained from the sale of the electricity produced; within a calendar year, the producer shall not produce more electricity than it consumes; the transit of energy through the grid shall be carried out by applying the compensating system in physical units (kwh).
 - ii) The applicant (local authority) shall be the owner of the investment, shall operate the investment and shall not transfer such activity to any economic operator.
- c) *Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?*

The call for proposals of projects within SOP IEC – Axis 4 is “open with deadline” (the financing applications shall be filed by the deadline published in the call for proposals of projects). After the deadline for filing the financing application has expired, it is possible to file financing applications only following the publication of a new call for proposals of projects by IEB.

During this programming period (2007-2013), two calls for projects have taken place so far: the first one in August – September 2008 and the second call in January – April 2010

C) The scheme offered by the “National programme for energy efficiency increase and use of renewable energy sources in the public sector for 2009-2010”

Regulation

a) What is the legal basis for this obligation/target?

The National programme for energy efficiency increase and use of renewable energy sources in the public sector for 2009-2010 was approved by Government Decision 1661/2008, as subsequently amended.

The regulation for the selection of applicants was approved by MEF Order 3722/2008.

b) Are there any technology-specific targets?

There are no technology-specific targets, but there are types of eligible investment objectives.

c) What are the concrete obligations/targets per year (per technology)?

The National Programme 2009-2010 ensures financial support through non-refundable co-financing from the state budget for the following types of investment targets:

- Rehabilitation and modernisation of the centralised thermal energy supply systems including the change of the type of fuel for energy combustion installations (for example, change to biomass);
- Thermal rehabilitation of public buildings and use of local potential of renewable energy sources for electricity and/or thermal energy supply (projects with a strong socio-economic impact);
- Modernisation of internal and external public lighting.

Only the first two of these types explicitly aim at using RES.

d) Who has to fulfil the obligation?

The competent implementation authority of the National Programme 2009-2010 was initially ARCE. In November 2009, after the Agency has merged with ANRE (according to Law 329/2009), this obligation was taken over by ANRE.

The financial support for the co-financing of the projects is ensured from the state budget, through the budget of the Ministry of Economy, Commerce and Business Environment by means of transfers between the public administration units.

e) What is the consequence of non-fulfilment?

The specific legislation does not stipulate consequences of non-fulfilment.

f) Is there any mechanism to supervise fulfilment?

The competent implementation authority of the National Programme 2009-2010 is ARCE/ANRE.

g) Is there any mechanism to modify obligations/targets?

The programme is for the short-term (2009-2010) and no mechanisms to modify obligations/targets are laid down.

Financial support:

a) What is the name and a short description of the scheme?

The scheme provided by the “National programme for energy efficiency increase and use of renewable energy sources in the public sector for 2009-2010” ensures financial support through non-refundable co-financing from the state budget for the following types of investment targets:

- Rehabilitation and modernisation of the centralised thermal energy supply systems including the change of the type of fuel for energy combustion installations (for example, change to biomass);
- Thermal rehabilitation of public buildings and use of local potential of renewable energy sources for electricity and/or thermal energy supply (projects with a strong socio-economic impact);

- Modernisation of internal and external public lighting.

Only the first two of these types explicitly aim at using RES.

Initially, 32.9 million lei for 2009 and 40 million lei for 2010 were allocated from the state budget for the programme financing. Due to the budgetary difficulties in a period of economic crisis, the amounts were subsequently reduced to 22.3 million lei for 2009 and 11 million lei for 2010.

The three types of eligible investment targets benefit from the following percentage allocations of these total sums:

- 40% - for the rehabilitation and modernisation of CTESS including the change of the type of fuel for energy combustion installations (for example, change to biomass)
- 40% - for thermal rehabilitation of public buildings and use of local potential of renewable energy sources for electricity and/or thermal energy supply (projects with a strong socio-economic impact), including the reimbursement of the 50% share of the costs VAT included corresponding to the execution of the energy audit of the public building on the basis of which the thermal rehabilitation investment project was executed;
- 20% - for the modernisation of internal and external public lighting.

The initiator and beneficiary of the investment project is a local authority that must comply with the public procurement regulations.

The substantiation of the investment project shall be carried out based on a feasibility study approved by the local authority according to the local energy strategy.

The beneficiary shall demonstrate that it allocates financial sources from the local budget or accesses other financing sources that cover a certain quantum of the project value or project stage for which co-financing is required, namely:

- minimum 70% for rehabilitation and modernisation works of CTESS and for the modernisation of internal and external public lighting;
- minimum 50% for thermal rehabilitation works of public buildings.

b) Is it a voluntary or obligatory scheme?

The scheme is obligatory.

c) Who manages the scheme? (Implementing body, monitoring authority)

ARCE/ANRE is the competent implementation authority of the National Programme 2009-2010, in which capacity:

- it performs the specialist technical analysis for the determination of the project eligibility and selection based on certain technical and economic criteria;
- it collects the data on the investment projects;
- it monitors their implementation throughout the entire period of the works and following the start-up, it verifies the attainment of the project parameters.

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The financial support for project co-financing shall be ensured from the state budget through the budget of the Ministry of Economy, Commerce and Business Environment through transfers between the public administration units.

e) How is long-term security and reliability addressed by the scheme?

The analysed programme specifies that the projects implementation shall lead to reliability increase in operation and assurance of most favourable energy parameters (high energy efficiency, low specific energy consumptions etc.).

f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme has been revised periodically by the State Budget Law in terms of the allocated amounts. Initially, 32.9 million lei for 2009 and 40 million lei for 2010 were allocated from the state budget for the programme financing by Government Decision 1661/2008. Due to the budgetary difficulties in a period of economic crisis, the amounts were subsequently reduced to 22.3 million lei for 2009 and 11 million lei for 2010. Due to the budgetary difficulties in a period of economic crisis, the amounts were subsequently reduced to 22.3 million lei for 2009 and 11 million lei for 2010.

At the end of the selection period of the investment works, if the co-financing amounts corresponding to the investment works selected for the three types of objectives do not fully cover the available amounts according to the percentage allocation, the implementation authority shall ensure the integral use of the available cash not yet consumed by additionally selecting eligible investment projects and by transferring the remaining available amounts from one type of works to another.

g) Does support differ according to technology?

The law does not stipulate distinctions of the support offered according to the technology used.

h) What are the expected impacts in terms of energy production?

At present, the impact on the energy production cannot be assessed.

i) Is support conditional on meeting energy efficiency criteria?

The presented programme is intended, as a whole, for energy efficiency increase in the public sector. The RES promotion through the support scheme relevant to this programme can be carried out in the context of measures that lead to the increase of energy efficiency.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

The presented scheme is an already existing measure stipulated by Government Decision 1661/2008.

k) Is this a planned scheme? When would it be operational?

The scheme became operational in 2009.

l) What start and end dates (duration) are set for the whole scheme?

The analysed programme and the presented support scheme are available for the period 2009-2010.

m) Are there maximum or minimum sizes of system which are eligible?

The law does not lay down maximum and minimum limits of the size of a system in order that such system be eligible.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

A certain project cannot receive support from other schemes financed from public funds (for example through the **Co-financing scheme without applying the state aid rules – B2** presented above).

o) Are there regional/local schemes? If so, please detail using the same criteria.

There are no regional/local schemes.

Specific questions for financial support for investment:

a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)?

The presented support scheme consists in granting non-refundable financing from the state budget for the carrying out of investment targets.

b) Who can benefit from this scheme? Is it specified for certain technology(/ies)?

The support scheme is intended for the local public administrations. It is not a specific scheme for certain technologies.

c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The support scheme corresponding to the analysed programme has a period of two years (2009 and 2010). There are calls in the first part of each year of the respective period. The characteristics of the scheme have been presented above.

D) Scheme offered by “Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro”

Regulation

a) What is the legal basis for this obligation/target?

The main legislative acts that constitute the legal basis of the Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro are:

- Emergency Government Ordinance 196/2005 on the Environment Fund as subsequently amended and supplemented
- GD 57/2009 on the organisation and operation of the Ministry of Environment
- Environment Minister's Order 1342/2009 approving the Financing Guide of the Programme on the production of electricity from renewable sources: wind power, geothermal, solar, biomass and hydro.

b) Are there any technology-specific targets?

There are no technology-specific targets.

c) What are the concrete obligations/targets per year (per technology)?

The targets of the programme are the following:

- to start up new production capacities of energy from renewable sources;
- economic development of the regions in which investments are made;
- to meet the electricity and heating needs in the less favoured areas;
- to produce green energy and to attain the environmental standards by diminishing the pollution;
- to reduce the dependence on the imports of primary energy resources (mainly, fossil fuels) and to improve security in supply;
- environment protection by reducing the pollutant emissions and to combat climate change.

These targets are valid for the entire period of the programme; annual concrete targets are not set.

d) Who has to fulfil the obligation?

The financial support applicants (large, medium and small enterprises) shall file projects that contribute to the achievement of the programme targets. They must fulfil certain eligibility criteria. The filed projects shall also fulfil the conditions laid down by the Programme Financing Guide.

The competent authority for the programme implementation is the Environment Fund Administration.

The programme can be carried out on an annual basis within the limit of the funds intended for such use through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

e) What is the consequence of non-fulfilment?

The applicants' failure to comply with the obligations laid down by the Programme Financing Guide entails the rejection of the respective projects for financing.

f) Is there any mechanism to supervise fulfilment?

The competent authority for the programme implementation is the Environment Fund Administration.

In this capacity, the competent authority:

- organises the financing sessions;
- verifies the fulfilment of the eligibility criteria by the applicants/files lodged;

- carries out the selection of projects meeting the eligibility criteria and approves the financing;
- monitors the project implementation and reimburses the eligible expenses according to the legal provisions;
- monitors the project following the completion of works in terms of functionality and achievement of the purpose defined in the project.

g) Is there any mechanism to modify obligations/targets?

The programme can be carried out on an annual basis within the limit of the funds intended for such use through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

Financial support:

a) What is the name and a short description of the scheme?

The scheme offered by the “Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro” ensures financial support by non-refundable co-financing from the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund for the carrying out of investments.

The support scheme is intended for large, medium or small enterprises that have recorded in the company’s articles of incorporation the activity on the electricity and/or thermal energy production and which fulfil the eligibility criteria of the applicant. Such criteria shall be presented below.

It is eligible the project that cumulatively fulfils the following criteria:

- The feasibility study is drawn up based on the provisions of Government Decision No 28/2008 approving the framework contents of the technical and economic documentation relevant to public investments;
- It demonstrates, within the feasibility study, the usefulness and efficiency of the investment;
- It demonstrates, through economic and financial calculations, that following the project implementation, the consumption of energy from conventional sources shall be reduced;
- The feasibility study contains the necessary information for the technical and financial evaluation of the project;
- The project costs are detailed per each category of expenditure;
- It complies with the national and Community provisions on environment protection and state aid;
- The production capacity of the energy unit shall not exceed 10 MW.

The financing shall be granted in the amount of maximum 50% of the total eligible value of the project for the entire Romanian territory except when the beneficiary has the registered office/working point in which the project shall be implemented in the Bucharest-Ilfov region where the financing is granted in the amount of maximum 40% of the total eligible value of the project and without exceeding the maximum amount that can be granted to a beneficiary.

The maximum sum that can be granted for a project is in the amount of 30 million lei. The established ceilings shall apply to the total amount financed by the Authority for the projects that benefit from state aid.

The Authority shall support the project financing by reimbursing, on the basis of the supporting documents, the amounts representing the eligible expenses laid down by the financing contract and drawn up following the contract signing.

The Authority shall not grant payments in advance, therefore, the beneficiary shall support the project execution from own financial sources by the time of the reimbursement.

The Authority does not make payments for the invoices representing advances under the contracts concluded between the beneficiaries of the financing and the project-specific product/work suppliers.

The reimbursement shall be carried out as the project is carried out in accordance with the financing schedule.

The Authority's Personnel shall verify the status and implementation of the project according to the contractual provisions through control visits on the project location and through verifications, at the beneficiary's site, of any relevant document necessary for the execution of the project.

Quarterly, the beneficiary is under the obligation to draw up a report on the progress of the project implementation.

At the end of the project implementation, the financing beneficiary shall draw up and shall submit to the Authority, within the deadline set by contract, the original of a completion report which shall be verified by the project responsible of the Authority and shall be subject to the its chairman for approval. On submitting the completion report, the beneficiary is under the obligation to prove the full payment of the products purchased.

Following the completion of the project, the investment shall be maintained in the beneficiary region at least for 5 years if the beneficiary is a large enterprise and for at least 3 years if the beneficiary is SME.

During the monitoring period, set by the financing contract, every six months from completion the beneficiary shall draw up and submit a report on the functionality and carrying-out of the activities for the achievement of the purpose defined in the project.

b) Is it a voluntary or obligatory scheme?

The scheme is obligatory.

c) Who manages the scheme? (Implementing body, monitoring authority)

The competent authority for the programme implementation is the Environment Fund Administration.

In this capacity, the competent authority:

- organises the financial sessions;
- verification of the compliance with the eligibility criteria by the applicants/files lodged;
- carries out the selection of projects complying with the eligibility criteria and approves the financing;
- monitors the project implementation and deducts the eligible expenses according to the legal provisions;
- monitors the project following the completion of works in terms of functionality and achievement of the purpose defined in the project.

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national?

The programme financing is made from the revenues of the Environment Fund. The programme can be carried out on an annual basis within the limit of funds intended for such use through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

e) How is long-term security and reliability addressed by the scheme?

Law 220/2008 stipulates that:

- Producers of electricity from renewable energy sources have priority access to the electricity transmission/distribution network insofar as the safety of the National Energy System is not affected.
- TSO and DO shall provide the transmission, respectively the distribution of E-RES guaranteeing reliability and security of electricity networks.

It implicitly results that, following the granting of the approval for network connection, TSO and DO shall undertake the responsibility regarding the networks operation under security and reliability conditions.

By the amendments to Law 220/2008 approved by the House of Representatives in 2010 it is stipulated that the transmission and system operator and/or distribution operators shall provide the transmission, respectively the distribution as well as priority dispatching of electricity produced from renewable energy for all producers of energy from renewable sources, irrespective of capacity, based on transparent and non-discriminating criteria with the possibility to modify notifications during the operation day according to the methodology established by ANRE within 90 days from the entry into force of the Law so that the limitation or interruption of energy production from renewable sources to be applied only in exceptional cases, if this is necessary for the stability and security of the National Energy System.

f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is annually revised as regards the granted funds. In accordance with the previously specified aspects, the scheme is financed from the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

g) Does support differ according to technology?

The law does not provide for differentiations of the support granted depending on the applied technology.

h) What are the expected impacts in terms of energy production?

Taking into account the fact that the scale of the project basically depends on the funds annually allocated through the Environment Fund budget, the impact on the energy production cannot be currently assessed.

i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria but on meeting eligibility and economic efficiency criteria.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

The presented scheme is an existing measure regulated by:

- GEO 196/2005 on the Environment Fund as subsequently amended and supplemented
- GD 57/2009 on the Organisation and Operation of the Ministry of Environment
- Ministry of Environment Order 1342/2009 on the approval of the Guide on financing the Programme for the production of electricity from renewable sources: wind, geothermal, solar, biomass and hydro.

The first project submission session took place during the period 9 – 27 November 2009. 19 projects have been approved (Table 4.9)

Table 4.9

Crt. No.	Applicant	Project title	CA approved value (lei)
1	S.C GENERA AVANTE S.R.L	Construction of the heating plant based on biomass, site Satu-Mare, Harghita County	28,479,913.80
2	S.C SILVEX S.A	Development of a thermoelectric power plant based on biomass in Vanatori Commune, Neamt County	27,500,875.08
3	S.C GENERA AVANTE S.R.L	Development of a heating plant based on biomass in the Borlesti area, Neamt County	27,407,245.23
4	S.C. GEOBAY GLOBAL S.RL	Construction of the heating plant based on biomass, site South-West Feldioara, Brasov County	28,591,284.42
5	S.C. GEOBAY GLOBAL S.RL	Construction of the heating plant based on biomass, site Bocsa, Caras- Severin County	28,763,919.78
6	S.C General Energetic	CHP II based on biomass with a power of 6.5 MW – Pangarati Commune, Stejaru Village, Neamt County	28,128,692.15
7	SC GENERAL CONCRETE CERNAVODA SRL	Placement of a wind farm in Nicolae B•lcescu Commune	19,033,396.01
8	SC CUSTOMLINE ENERGY SRL	Wind power plant Corni 3 and 4	6,525,735.77
9	SC ELEKTRA INVEST SRL	Wind power plant Mircea Voda - Tortomanu 2	13,051,471.50
10	SC ROMWIND SRL	Construction of new electricity production facilities – 7 wind power plants in Vulturii Commune	19,587,167.16
11	SC ROMWIND SRL	Construction of new electricity production facilities – 7 wind power plants outside the built-up area of Beidaud Commune	19,587,167.16

Crt. No.	Applicant	Project title	CA approved value (lei)
12	SC GRENERG SRL	Development of the Grenerg/Scanteiesti I wind farm by installing a wind power plant of 0.8-1.5 Mw	4,164,924.00
13	SC Real Excont	Increase of energy production from renewable sources S•cele Wind Power Plants, Constan•a County	21,861,828.34
14	SC ELSID SA	Hydro site on Prahova River - CHEMA Lunca Cornului	10,005,329.98
15	S.C Electrica Serv	Development of Wind Fram - Electrica Serv 1 in Ghermanesti Locality, Dranceni Commune, Vaslui County	23,124,893.30
16	S.C Panel International	Wind Fram – Calugareni, Prahova County	19,623,754.80
17	SC ELSID SA	Hydro site on Prahova River - CHEMA Cămpina	13,285,603.66
18	S.C. Eolian Plus S.R.L	Hydro site on Baicu river, Maramures County	12,248,529.30
19	S.C Hidroprod S.A	Hydro site on Valea Neagra river, Maramures County	11,334,758.85
	TOTAL		362,306,490.29

k) Is this a planned scheme? When would it be operational?

The scheme became operational in 2009.

l) What start and end dates (duration) are set for the whole scheme?

The analysed programme and the presented support schemes were officially initiated at the same time with the approval of the Financing Guide by Order 1342/2009. An end date has not been established for the programme.

m) Are there maximum or minimum sizes of system which are eligible?

The production capacity of the energy unit shall not exceed 10 MW for the project to be eligible. The maximum amount to be granted for the project, during the financing session, shall be of 30 million lei.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

A certain project cannot be supported by other schemes financed from public funds (for example through the **Co-financing scheme without the application of State aid rules - B2** previously presented).

o) Are there regional/local schemes? If so, please detail using the same criteria.

There are regional/local schemes with similar objectives (for example scheme B1 – Regional State aid scheme on use of energy renewable resources) but which cannot interfere with the presented scheme.

Specific questions for financial support for investment:

a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The presented support scheme consists in the granting of a non-refundable financing for performing investments from the Environment Fund budget.

b) Who can benefit from this scheme? Is it specified for certain technologies?

The support scheme aims at large, medium or small enterprises which have registered in their Articles of Association the activity related to electricity and/or thermal energy production and which cumulatively meet the following conditions:

- they are legal persons carrying out business activities in Romania;
- they operate and carry out business activities for at least 6 months from the financing file submission date;
- they act on their own behalf;
- they are owners or lessees of the land on which the electric networks and water supply systems for micro hydropower plants are to be installed and owners or concessionaires of the land and/or building on/in which the project is to be implemented on the entire duration of the project implementation and monitoring;
- they are not subject to judicial reorganisation or bankruptcy procedures, they are not in default or insolvency, their business activities are not suspended or they are not in similar situations;
- they have no debts towards the State regarding tax payment and other contributions to the State budget, social insurance budget, special and local budgets;
- they comply with provisions of Commission Regulation (EC) No 1.628/2006 of 24 October 2006 for the application of Articles 87 and 88 of the Treaty to national regional investment aid published in the Official Journal of the European Union series L No 302 of 1 November 2006;
- they prove their own contributions to the total eligible costs of the project for 50% of the total eligible value of the project when the beneficiary has its registered office/working point where the project is implemented on the entire Romanian territory, except for the projects implemented in the Bucharest – Ilfov area to which the beneficiary's own contribution represents 60% of the total eligible value of the project; the support of in kind contribution shall not be accepted;
- they have not breached legal provisions on environmental protection and do not sponsor activities having an adverse effect on the environment;
- they have not been financed from other public funds for the same eligible expenses of the project;

- they hold all agreements, notices, authorisations and approvals required by legislation in force applicable to the proposed project related works.

The scheme does not provide for differentiations depending on technology.

c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

One or more financing sessions may be annually organised within the limit of the amount granted from the Environment Fund.

Based on an order issued by the President of the Environment Fund Authority, the following shall be approved:

- the submission session;
- the amount allocated for the financing session.

4.4. Support schemes to promote the use of energy from renewable resources in heating and cooling

In Romania, the promotion of the use of energy from renewable sources in heating and cooling shall be performed by:

- a) financing from structural funds including:
 1. financing scheme with the application of State aid rules (scheme to be applied during the investment stage) – which stipulates the granting of a non-refundable financial support from structural funds to producers of electricity and/or thermal energy from renewable sources during the project implementation period;
 2. financing scheme without the application of State aid rules (granted only with the application of provisions contained in EC Regulation No 1083/2006)
- b) financing from the Environment Fund through the following programmes:
 1. Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality;
 2. Programme for the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro
 3. Programme for the increase of the production of energy from renewable sources
- c) Financing through the “National programme on the increase of energy efficiency and use of renewable energy sources in the public sector for 2009-2010.”
- d) Financing through the programme “District heating 2006-2015 – heat and comfort”

A. Financing from structural funds

Regulation

(a) What is the legal basis for this obligation/target?

- n Community legislation
- Council Regulation (EC) No 1083/2006 of 11 July 2006 establishing general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999 as subsequently amended;
- European Parliament and Council Regulation No 1080/2006 of 5 July 2006 on ERDF and repealing Regulation (EC) No 1783/1999;
- Commission Regulation (EC) No 1828/2006 of 8 December 2006 establishing rules for the implementation of Council Regulation (EC) No 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and of Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the ERDF as subsequently amended;

- Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation);
- EC Decision No 702/21 October 2006 on Community strategic guidelines on cohesion
- European Parliament and Council Directive 2004/18/EC of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts as subsequently amended and supplemented;
- European Parliament and Council Directive 2004/17/EC of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors as subsequently amended and supplemented;
- Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities;
- 2006/C54/08 – Guidelines on the regional State aid for the 2007-2013 period;
- Commission Regulation (EC) No 1628/2006 of 24 October 2006 on the application of Articles 87 and 88 of the Treaty to national regional investment aid as subsequently amended;

ⁿ National legislation

- GD No 457/2008 on the institutional framework for the coordination and management of structural instruments;
- Ministry of Economy and Finance Order No 273/2008 on the delegation of duties from MA SOP IEC to the Intermediary Energy Body;
- Government Emergency Ordinance No 34/2006 on the on the awarding of public procurement contracts, public works concession contracts and services concession contracts as subsequently amended and supplemented;
- GD No 925/2006 on the approval of rules for the application of provisions on the awarding of public procurement contracts of GEO No 34/2006 on the on the awarding of public procurement contracts, public works concession contracts and services concession contracts as subsequently amended and supplemented;
- GD No 651/2006 on the approval of State aid policy for the 2006-2013 period;
- GD No 759/2007 on eligibility rules for expenditures performed within the operations financed through operational programmes, as subsequently amended and supplemented and published in the Romanian Official Journal No 517 of 1 August 2007;
- GD No 28/2008 on the approval of framework content of the public investments related technical economic documentation as well as the structure and methodology for the drafting of the general estimate for investment objectives and intervention works;
- GD No 79/2003 on control and recovery of Community funds as well as inappropriately used associated co-financing funds, as subsequently amended and supplemented;
- GD No 1306/2007 on methodology standards for the application of Government Ordinance No 79/2003 on control and recovery of Community funds as well as inappropriately used associated co-financing funds;
- Government Emergency Ordinance No 64/2009 on financial management of structural instruments and their use for the convergence objective;

- Public Finance Ministry Order No 2548/2009 on the approval of methodology standards for the application of Government Ordinance No 64/2009 on financial management of structural instruments and their use for the convergence objective;
- Law No 346/2004 on the stimulation of SME's establishment and development, as subsequently amended and supplemented;
- Law No 31/1990 on trading companies, republished, as subsequently amended and supplemented;
- Law No 51/2006 on Public Utilities Community Services, as subsequently amended and supplemented;
- Ministry of Economy and Finance Order No 2228/22 July 2008 on the approval of the Eligible Expenditure List for projects financed within the Major Intervention Field 4.2 – "Use of renewable energy resources for the production of green energy" of Priority Axis 4 "Increase of energy efficiency and supply safety, in the context of fighting climate change" within the Sectoral Operational Programme "Increase of Economic Competitiveness" (SOP IEC) 2007-2013;
- GD No 750/2008 on the approval of the "Regional aid State scheme on the use of renewable energy resources";

(b) Are there technology-specific targets?

There are no objectives specific to a certain technology.

Within this operation, the financing shall be performed as follows:

1. For the **financing scheme with the application of State aid rules** – financial support shall be exclusively granted to economic operators for the performance of initial investments in order to use RES (solar sources, wind power sources, hydro energy for systems with installed power <10MW, biomass, geothermal sources, wave energy, biogas, gases resulting from waste fermentation – landfill gas, mud fermentation gas in waste water treatment plants) for the production of electricity and thermal energy.
2. For the **financing scheme without the application of State aid rules** – co-financing shall be granted to local authorities and intercommunity development associations for projects such as: projects for the establishment of new electricity and thermal energy production capacities both for self-consumption and the energy supply within the transmission and distribution network through the use of RES and projects for the modernization of energy production capacities using RES.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets per RES energy production technology.

For the financing of cogeneration projects (but only projects aiming at high-efficiency cogeneration through the use of RES), there is the obligation that over 40% of the (electricity and thermal) annually produced energy to be intended for sale.

Moreover, for projects involving energy production through combustion (either co-generation or separate production of electricity or thermal energy), the energy content of the annually used main fuel shall be of minimum 80% of renewable resources.

The biofuel production activity shall be eligible provided that it is performed for the production of energy within the same project.

(d) Who has to fulfil the obligation?

The obligation that over 40% of the annually produced (electricity and thermal) energy be intended for sale in the case of financing high-efficiency cogeneration projects through the use of RES shall be applicable for enterprises applicants.

The second abovementioned obligation shall apply to all applicants: enterprises and local public authorities/intercommunity development associations.

(e) What is the consequence of non-fulfilment?

Non-fulfilment of obligations and indicators undertaken by the beneficiary under financing contracts shall result in the withdrawal of the awarded financing proportional to extent of the non-fulfilment.

(f) Is there any mechanism to supervise fulfilment?

IEB/MA shall appoint a Monitoring Officer who will closely supervise the project implementation development. The monitoring process shall begin upon the signing of the financing contract and shall end 36/60 months after the completion of the project depending on the applicant type. Shortly after the signing of the contract, the beneficiary shall be contacted by the Monitoring Officer in order to discuss implementation conditions, activity schedules and for the confirmation of deadlines for the submission of refund applications.

(g) Is there any mechanism to modify obligations/targets?

Obligations established under the financing agreement cannot be modified.

Financial support

Structural funds financing shall be performed within the Sectoral Operational Programme "Increase of Economic Competitiveness" (SOP IEC), Priority Axis 4 (PA4) "Increasing energy efficiency and security of supply, in the context of combating climate change", Major Intervention Field (MIF 2) "Use of renewable energy resources for the production of green energy", Operation: "Supporting investments in the modernization and establishment of new electricity and thermal energy production capacities through the use of renewable energy resources: biomass, hydro-energy (within units with installed power under or equal to 10 MW), solar and wind power resources, biofuel, geothermal resources and other renewable energy resources".

Eligible applicants are:

- trading companies corresponding to the small, medium and large enterprises category;
- trading companies corresponding to the category of micro enterprises registered in urban localities (i.e. whose registered office is located in urban localities);
- authorities of local public administration, intercommunity development associations.

Projects proposed within this financing scheme shall meet the following eligibility conditions:

- the purpose and the targets of the project shall aim at the specific objectives of Priority Axis 4 of SOP IEC, as well as one or more of the operation objectives;

- the project implementation duration shall be of maximum 4 years from the signing of the financing contract and shall not exceed 31 July 2015;
- the project total value shall range between 400 thousand lei (VAT included) and 50 mil. Euro.

A.1. Regional State aid scheme on the use of renewable energy resources

(a) What is the name and a short description of the scheme?

Within this scheme, the following enterprises financed in accordance with Law No 31/1990 on trading companies shall benefit from project co-financing from PA 4 funds with the application of State aid rules, including:

- Y enterprises financed by local public authorities or intercommunity development associations;
- Y regional operators.

Non-refundable financing covered by the State aid, shall be granted to eligible applicants as investment aid, in accordance with regional investment State aid rules as stipulated by Regulation EC 1628/2006 on the application of Articles 87 and 88 of the EC Treaty to national regional investment aid and in accordance with provisions of GD 750/2008 for the approval of the “*Regional State aid scheme on the use of energy renewable resources*”.

Thus, the State aid intensity granted as non-refundable financing and expressed in shares of the total value of eligible expenditures of the project is of 70%/60%/50% for small/medium/large enterprises for all Romanian areas, except for Bucharest – Ilfov area, for which the State aid intensity is 10% smaller than the previously mentioned values.

The difference to the total value of the project shall be covered by the beneficiary. The latter shall bring a financial contribution of at least 30% of eligible costs, either from its own resources or from enlisted sources under a form not subject to any public aid.

Beneficiaries may opt for the pre-financing facility, this option being stipulated in the financing application and confirmed upon the signing of the financing contract.

The maximum pre-financing value for beneficiaries covered by State aid rules is of 35% of the total value of the non-refundable financing and shall be conditioned by the submission by the applicant of a bank letter of guarantee for the amount associated to the requested pre-financing.

The scheme implementation and development procedure shall be applied as follows:

- launching of project proposal applications;
- acceptance and registration of financing application;
- check of the administrative compliance of the financing application and the existence of accompanying documents: only project proposals that undergo this stage may be subject to the next stage;
- check of project proposals and beneficiaries eligibility: only project proposals that undergo this stage may be subject to the next stage;
- transmission to the beneficiary of the agreement in principle that the scheme eligibility conditions are met;
- technical and financial evaluation of projects;
- selection of projects;
- drafting and signing of the financing contract;
- projects development and expenditures refund: payments shall be performed by the SOP IEC Payment Unit based exclusively on supporting documents following the approval of the refund application;
- monitoring performance on the duration of the projects development;

- projects completion: the final payment shall be performed based on the documentation submitted on accordance with contractual provisions;
- monitoring performance following the projects implementation on a 5 year period, for large enterprises, and on a 5 year period for SMEs.

b) Is it a voluntary or obligatory scheme?

Financing energy production projects from structural funds within the regional State aid scheme on the use of renewable energy resources may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The financing scheme existent within SOP IEC is managed by the Ministry of Economy, Commerce and Business Environment (MECBE) – the Managing Authority while the PA 4 implementation is guaranteed by the Intermediary Energy Body (IEB) within the same Ministry.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The total estimated budget allocated for the scheme is of 200 mil. Euro (the equivalent in lei) out of which 169.7 mil. Euro (the equivalent in lei) represent non-refundable European funds guaranteed through the European Regional Development Fund while 30.3 mil. Euro (the equivalent in lei) represent public co-financing funds from the state budget through the Ministry of Economy, Commerce and Business Environment budget and is broken down by years as follows:

Table 4.10 Total budget of the scheme (mil. Euro)

Year	2008	2009	2010	2011	2012	2013
Total (Community funds and national public funds)	20.9	30.6	39.7	41.4	35.8	31.6

(e) How is long-term security and reliability addressed by the scheme?

The purpose of the financing scheme is to develop the market of energy production technologies from renewable sources in Romania and it therefore contributes to the energy supply security and reliability.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The financing scheme cannot be modified by national legislation since it was drafted in accordance with the applicable European Union legislation. The Applicant's Guide, approved by Government Decision and stipulating the conditions to be met by applicants and their projects, was yet updated and improved each time within the two project calls organised so far.

(g) Does support differ according to technology?

The support does not differ according to the applied technology.

(h) What are the expected impacts in terms of energy production?

It is expected that the implementation of investment projects for the establishment of new electricity and/or thermal production capacities through the use of renewable energy resources co-financed from PA 4 associated funds to contribute to the achievement of the strategic target of Romania, namely the share of electricity produced from these sources of the total gross electricity consumption to be of 33% in 2010, 35% in 2015 and 38% in 2020. Moreover, by Directive 2009/28/EC, Romania has to achieve the 24% target in 2020 as energy share of the final gross energy consumption.

(i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria. For co-generation projects however, such criteria must aim at high-efficiency co-generation.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is GD No 750/2008 for the approval of "Regional State aid scheme on the use of renewable energy resources" published in the Official Journal No 543/18 July 2008.

(k) What start and end dates (duration) are set for the whole scheme?

The scheme started in 2008 and shall apply by 31 December 2013.

(l) Are there maximum or minimum sizes of system which are eligible?

In order for an investment project in a hydro-energy unit to be eligible, the installed power of the said unit shall be under or equal to 10 MW. For the other project types there are no maximum or minimum sizes of system to be eligible.

(m) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

In order to be eligible within the scheme, the project's activities must not have been financed and must not be currently financed from other public funds, except for preliminary studies (pre-feasibility study, geo-topographic analysis, potential assessment study, feasibility study, technical project, execution details etc.).

(n) Are there regional/local schemes? If so, please detail using the same criteria.

The described scheme is a regional scheme applicable in all 8 development regions of Romania. Moreover, for applicants implementing projects in Bucharest-Ilfov area,

which is considered a more developed area from economic point of view, the State aid intensity shall be decreased with 10% in relation to values stipulated in GD 750/2008.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The support scheme for the financing of energy production projects from renewable energy resources implies the granting of a non-refundable financing from structural funds for the performance of investments.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The State aid scheme is intended for economic operators, large, medium and small enterprises within all economic sectors and performing initial investments in any of the 8 development regions of Romania, except for the following economic sectors:

- fisheries and aquaculture;
- construction of ships;
- mining industry;
- ironworks industry;
- synthetic fibres;
- activities related to primary production of agricultural products listed in Annex No 1 to the Treaty establishing the European Community;
- processing and marketing of agricultural products, including those imitating or substituting milk or other dairy products;
- real estate development (promotion);
- arms and ammunition manufacturing and fighting military vehicles manufacturing.

Within this scheme, there are financed projects for the production of thermal energy and/or electricity from renewable energy sources (RES), namely: biomass, hydro-energy resources (in units with installed power under or equal to 10 MW), solar and wind power resources, biofuel, geothermal resources and other renewable energy resources.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The type of the project proposal call within SOP IEC – Axis 4 is “open, with deadline” (the submission of financing applications shall be allowed within the deadline announced in the project proposal call). Following the expiry of the financing application submission deadline, financing applications cannot be submitted but following the drafting of a new call for proposals by the Intermediary Energy Body. During the current programming period (2007-2013) two calls for projects took place so far: the first one in August – September 2008 and the second in January – April 2010.

A.2. Financing scheme without the application of State aid rules

(a) What is the name and a short description of the scheme?

Within the financing scheme without State aid (developed through the application of provisions contained in Regulation EC No 1083/2006) the following categories of applicants shall benefit from co-financing without the application of State aid rules:

- authorities if public local administrations;
- intercommunity development associations.

The support granted for these categories of applicants is the following:

- 98% of the total eligible cost shall be granted for projects of local authorities/community development associations with a total investment cost under 1 million Euro;
- for projects of local authorities/community development associations with a total investment cost over 1 million Euro:
 - Y financial support shall be granted based on the funding gap calculation for revenue generating projects;
 - Y financial support shall represent 98% of the total eligible costs for non-revenue generating projects.

There are eligible for funding only:

- project for the production of thermal energy (as public utility service or for self-consumption of public institutions financed from the public local authorities budget);
- projects for the production of electricity (or co-generation projects) which do not aim at introducing the produced energy (for self-consumption of all institutions and authorities providing public or general economic interest services for which a public local authority incurs the payment from its own budget of the consumed electricity and for public lighting) into the NES;
- projects for the production of electricity (or co-generation projects) for self-consumption (of all institutions and authorities providing public or general economic interest services for which a public local authority incurs from its own budget the payment of the consumed electricity and public lighting) which aim at introducing the produced energy into the NES in compliance with the following conditions (for the latter projects):
 - Y While running the project, the electricity production shall not be tariffed to users and no revenues shall be earned from the produced electricity tariffing and the producer shall not produce more electricity than needed for consumption (annual calculation). Applicants shall prove that the produced electricity is exclusively intended for self-consumption of institutions specified in the project and/or for public lighting. Energy transit in the network shall be performed by the application of the compensatory system in physical units (kwh);
 - Y The applicant (local authority) shall own and operate the investment and shall not transfer this activity to an economic operator.

If an authority of the public local administration of an intercommunity development association provides a thermal energy supply service in centralised system (public utility service), the public service management (thermal energy production, transmission, distribution and supply in centralised system) shall be compulsorily performed directly or delegated to operators through public tender.

Beneficiaries may opt for the pre-funding facility, this option being stipulated in the financing application and confirmed upon the signing of the financing contract.

The pre-funding maximum value for public local authorities/intercommunity development associations beneficiaries shall represent 30% of the eligible value of the financing contract.

b) Is it a voluntary or obligatory scheme?

Structural funds financing of projects covered by the financing scheme without the application of State aid rules may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The financing scheme existent within SOP IEC is managed by the Ministry of Economy, Commerce and Business Environment (MECBE) – the Managing Authority while the PA 4 implementation is guaranteed by the Intermediary Energy Body (IEB) within the same Ministry.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The support scheme shall apply based on SOP IEC funds.

(e) How is long-term security and reliability addressed by the scheme?

The purpose of the financing scheme is to develop the market of energy production technologies from renewable sources in Romania which may contribute to the energy supply security and reliability.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The financing scheme cannot be modified by national legislation since it was drafted in accordance with the applicable European Union legislation. The Applicant's Guide, approved by Government Decision and stipulating the conditions to be met by applicants and their projects, was yet updated and improved each time within the two project calls organised so far.

(g) Does support differ according to technology?

The support does not differ according to the applied technology but it differs when projects are revenue generating or non-revenue generating. For projects of local authorities/community development associations involving an investment cost over 1 million Euro:

- Y financial support shall be granted based on the funding gap calculation for revenue generating projects;
- Y financial support shall represent 98% of the total eligible costs for non-revenue generating projects.

(h) What are the expected impacts in terms of energy production?

It is expected that the implementation of investment projects for the establishment and modernisation of electricity and/or thermal production capacities through the use of renewable energy resources co-financed from PA 4 associated funds to contribute to the achievement of the strategic target of Romania, namely the share of electricity

produced from these sources of the total gross electricity consumption to be of 33% in 2010, 35% in 2015 and 38% in 2020. Moreover, by Directive 2009/28/EC, Romania has to achieve the 24% target in 2020 as energy share of the final gross energy consumption. This scheme may have a more important impact on thermal energy production by local authorities since this constitutes a revenue generating activity.

(i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria but for co-generation projects, such criteria must aim at high-efficiency co-generation.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The financing shall be granted in accordance with provisions of Council Regulation (EC) 1083/2006 establishing general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) 1260/1999.

(k) What start and end dates (duration) are set for the whole scheme?

For projects not covered by State aid, expenditures shall be deemed as eligible if they are performed between 1 January 2007 and 31 July 2015. In order to be eligible, expenditures performed between 1 January 2007 and the financing contract signing date must be performed in compliance with the financing contract provisions particularly those referring to public procurement.

(l) Are there maximum or minimum sizes of system which are eligible?

The total value of the projects shall range between 400 thousand lei (VAT included) and the equivalent in lei (according to the Inforeuro exchange rate of the financing application submission month, VAT included) of 50 mil. Euro. The maximum funding offered for the project shall not exceed 80 mil. lei.

(m) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

In order to be eligible within the scheme, the project's activities must not have been financed and must not be currently financed from other public funds, except for preliminary studies (pre-feasibility study, geo-topographic analysis, potential assessment study, feasibility study, technical project, execution details etc.).

(n) Are there regional/local schemes? If so, please detail using the same criteria.

The described scheme is a regional scheme applicable in all 8 development regions of Romania.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The support scheme for the financing of energy production projects from renewable energy resources implies the granting of a non-refundable financing from structural funds for the performance of investments and modernisations.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The scheme beneficiaries are:

- authorities of public local administrations;
- intercommunity development associations.

The financing is the same for all types of energy production technologies from renewable sources.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The type of the project proposal call within SOP IEC – Axis 4 is “open, with deadline” (the submission of financing applications shall be allowed within the deadline announced in the project proposal call). Following the expiry of the financing application submission deadline, financing applications cannot be submitted but following the drafting of a new call for proposals by the Intermediary Energy Body. During the current programming period (2007-2013) two calls for projects took place so far: the first one in August – September 2008 and the second in January – April 2010.

B. Financing from the Environment Fund

B.1. Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality

Regulation

(a) What is the legal basis for this obligation/target?

Any financing granted from the Environment Fund shall comply with State aid applicable legislation. The financing shall be performed based on the scheme developed in accordance with Commission Regulation (EC) No 1628/2006 of 24 October 2006 for the application of Articles 87 and 88 of the Treaty establishing the EC or based on the European Commission decision issued following the notification transmitted by EFA.

Other legislation constituting legal basis for this Financing Programme:

- GEO No 196/2005 on the Environment Fund approved by Law No 105/2006 as subsequently amended and supplemented (Law No 292/2007, GEO No 37/2008 and GEO No 25/2008);
- GD No 1/2006 on the Regulation on the organisation and operation of EFA, amended by GD No 832/2008;
- Ministry of Environment and Forests Order No 565/2009 on the approval of the Financing Guide of the “Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal

energy and wind power energy or other systems leading to the improvement of air, water and soil quality”.

(b) Are there any technology-specific targets?

There are no technology-specific targets.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets (per technology).

The purpose of the Programme is to improve air, water and soil quality by reducing the level of pollution caused by wood and fossil fuels combustion for the production of thermal energy used for heating and for obtaining domestic hot water as well as to stimulate the use of systems which use to this effect non-polluting renewable energy sources.

(d) Who has to fulfil the obligation?

The projects proposed by eligible financial support applicants (territorial and administrative divisions and the economic operators having as main scope of activity “Hotels and other similar accommodation facilities” shall contribute to the fulfilment of the Programme’s target. During the projects implementation, the financing contract provisions shall also be complied with.

(e) What is the consequence of non-fulfilment?

Non-fulfilment by the beneficiary of any of the obligations undertaken under the financing contract shall constitute a defaulting case. In such situation, EFA shall notify the beneficiary within maximum 5 days from the finding of a defaulting case and if deficiencies specified in the notification are not remedied within maximum 15 days from the notification date, EFA shall be entitled to take the following measures without delay and without fulfilling any prior formality:

- temporary cease of the financing use until the causes entailing the cease are remedied;
- final cease and unilateral termination, without the fulfilment of any prior formality, of the financing contract including the recovery of the amounts transferred to the beneficiary under the conditions of the Fiscal Procedure Code/Civil Procedure Code.

(f) Is there any mechanism to supervise fulfilment?

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with contractual provisions and shall monitor the projects implementation results on a period of 5 respectively 3 years from the project completion for SMEs.

(g) Is there any mechanism to modify obligations/targets?

No mechanism to modify obligations/targets are known.

Financial support

(a) What is the name and a short description of the scheme?

Within the **“Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality”**, projects for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality shall be financed from the Environment Fund.

The following categories of applicants shall be eligible within the Programme:

- territorial and administrative divisions: legally established and delimited communes, town/municipalities and counties including administrative – territorial subdivisions of Bucharest Municipality;
- economic operators having as main scope of activity “Hotels and other similar accommodation facilities”.

Territorial and administrative divisions may submit financing projects with the Programme for the residential buildings in their property or under their management, or for the owners'/ house tenants' and flat owners' associations with legal status which are domiciled within the jurisdiction of the respective territorial and administrative divisions.

The financing shall be non-refundable as share of the project's eligible expenditures. The non-financed share of eligible expenditures shall constitute the applicant's own contribution and shall be guaranteed from its own financial sources. The financing shall be granted in instalments within the financing contract validity period and as the project develops.

For territorial and administrative divisions, the financing shall be granted in a share of up to 80% of the project's eligible expenditures. The Local Council shall establish the participation quota for owners'/ house tenants' associations.

The financing quantum may not exceed the following values:

- 4 mil. lei for territorial and administrative divisions with a number of inhabitants larger than 100 000;
- 3 mil. lei for territorial and administrative divisions with a number of inhabitants between 50 000 and 100 000;
- 2 mil. lei for territorial and administrative divisions with a number of inhabitants between 20 000 and 50 000;
- 1 mil. lei for territorial and administrative divisions with a number of inhabitants between 3 000 and 20 000;
- 500 thousand lei for territorial and administrative divisions with a number of inhabitants under 3 000.

For economic operators, the financing shall be granted in a share of up to 50% of the project's eligible expenditures. The financing shall constitute minimis aid established and granted based on the minimis scheme approved by an order of the Authority's President in compliance with provisions of Commission Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Art. 87 and 88 of the Treaty on minimis aids published in the Official Journal of the European Union No OJ L 379 of 28 December 2006.

Within a submission session, an applicant may submit maximum two projects. One project may refer to several sites which are in the property or under the concession or management of the applicant. The amount requested in the financing application represents the total of eligible expenditures for all sites referred to in the project.”

b) Is it a voluntary or obligatory scheme?

The financing from the Environment Fund of projects for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The Programme is managed by the Environment Fund Administration (EFA) coordinated by the Ministry of Environment and Forests (MES) which manages the Environment Fund.

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with contractual provisions and shall monitor the projects implementation results on a period of 5 respectively 3 years from the project completion for SMEs.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The Programme financing shall be performed from the Environment Fund revenues. The Environment Fund revenues are public revenues and consist in fees and contributions having the same legal status as taxes, fees, contributions and other amounts owed to the general consolidated budget.

The Programme is annually developed within the limit of funds allocated to this effect through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision. For the financing of projects submitted by applicants and approved within the Programme run in 2009 the amount of 310 mil. lei was established out of which:

- 210 mil. lei for projects submitted by administrative and territorial divisions;
- 100 mil. lei for projects submitted by economic operators.

(e) How is long-term security and reliability addressed by the scheme?

The purpose of the financing scheme is to develop the market of energy production technologies from renewable sources in Romania and it therefore contributes to the energy supply security and reliability.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is not revised while only the allocated funds are annually revised depending on the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

(g) Does support differ according to technology?

The support does not differ according to technology.

(h) What are the expected impacts in terms of energy production?

The impact of the energy production cannot be assessed since the number of projects per each financing session depends on the size of funds annually allocated from the Environment Fund budget.

(i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is the Ministry of Environment Order No 565/2009 for the approval of the Financing Guide of the "Programme for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality" as well as legislation on the organisation and operation of EFA and the Environment Fund.

(l) What start and end dates (duration) are set for the whole scheme?

This financing programme entered in force in 2009 together with the approval of the Financing Guide by Environment Ministry No 565/2009. No scheme end date is specified.

(m) Are there maximum or minimum sizes of system which are eligible?

There is no maximum or minimum size of system to make it eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

It shall be not accepted for the State aid granted within the Programme to be cumulated with other State aids or other Community or national funds which are granted in relation to the same eligible costs if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

Moreover, the State aid granted within this Programme cannot be cumulated with a minimis aid granted based on the legislation on minimis aid in force when it is granted in relation to the same eligible costs or investment project if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are regional schemes. Such schemes were previously described.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The Programme grants non-refundable funds from the Environment Fund for investments in projects for the replacement or supplementation of the classical heating systems with systems using solar energy, geothermal energy and wind power energy or other systems leading to the improvement of air, water and soil quality.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The beneficiaries of this Programme are:

- territorial and administrative divisions: legally established and delimited communes, town/municipalities and counties including administrative – territorial subdivisions of Bucharest Municipality;
- economic operators having as main scope of activity “Hotels and other similar accommodation facilities”.

There is no specified scheme for certain technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Financing sessions shall be annually organised depending on the size of funds allocated from the Environment Funds for this Programme.

B.2. The Programme on the production of energy from renewable energy sources: wind power, geothermal, solar, biomass and hydro

Regulation

(a) What is the legal basis for this obligation/target?

Any financing granted from the Environment Fund shall comply with State aid applicable legislation. The financing shall be performed based on the scheme developed in accordance with Commission Regulation No 1628/2006 on the application of Articles 87 and 88 of the Treaty establishing the EC or based on the European Commission Decision issued following the notification transmitted by EFA.

Other legislation constituting legal basis for this Financing Programme:

- GEO No 196/2005 on the Environment Fund approved by Law No 105/2006 as subsequently amended and supplemented (Law No 292/2007, GEO No 37/2008 and GEO No 25/2008);
- GD No 1/2006 on the Regulation on the organisation and operation of EFA, amended by GD No 832/2008;
- Ministry of Environment and Forests Order No 1342/2009 on the approval of the Financing Guide of the Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro.

(b) Are there any technology-specific targets?

There are no technology-specific targets.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets (per technology).

The purposes of the Programme consist in:

- use of renewable energy resources: solar, wind power, hydro-energy, geothermal, biomass, biogas, gases resulted from waste/mud fermentation within treatment plants for the production of electricity and/or thermal energy;
- improvement of environment quality;
- reduction of greenhouse gas emission;
- rational and efficient use of primary energy resources;
- maintenance and protection of ecosystems.

In order to achieve the proposed aims, the Programme's targets are the following:

- commissioning of new capacities of energy production from renewable sources;
- economic development of regions where investments are performed;
- meeting the needs of electricity and heating in less favoured areas;
- production of green energy and meeting environmental standards by reduction of pollution;
- reduction of dependence on imports of primary energy resources (mainly fossil fuels) and improvement of supply safety;
- environment protection by reducing polluting emissions and fighting climate change.

(d) Who has to fulfil the obligation?

Projects proposed by eligible financial support applicants (large, medium or small enterprises and economic operators which have registered in their Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: "Production and supply of electricity and thermal energy, gas, hot water and air conditioning") shall contribute to the achievement of the Programme's targets. Moreover, the financing contract provisions shall be complied with during the projects implementation.

(e) What is the consequence of non-fulfilment?

Non-fulfilment by the beneficiary of any of the obligations undertaken under the financing contract shall constitute a defaulting case. In such situation, EFA shall notify the beneficiary within maximum 5 days from the finding of a defaulting case and if deficiencies specified in the notification are not remedied within maximum 30 days from the notification date, EFA shall be entitled to take the following measures without delay and without fulfilling any prior formality:

- temporary cease of the financing use until the causes entailing the cease are remedied;
- final cease and unilateral termination, without the fulfilment of any prior formality, of the financing contract including the recovery of the amounts transferred to the beneficiary under the conditions of the Fiscal Procedure Code/Civil Procedure Code.

(f) Is there any mechanism to supervise fulfilment?

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with

contractual provisions and shall monitor the projects implementation results on a period of 5 respectively 3 years from the project completion for SMEs.

During the monitoring period established under the financing contract, the beneficiary shall draft and submit, every 6 months from the completion of the project, a report on the functionality and performance of activities for the achievement of the target set in the project.

The personnel monitoring the project shall perform control visits within the working point where the project was implemented in order to check the physical status of the project implementation.

(g) Is there any mechanism to modify obligations/targets?

No mechanism to modify obligations/targets are known.

Financial support

(a) What is the name and a short description of the scheme?

The object of the “**Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro**” is represented by non-refundable financing from the Environment Fund of projects aiming at the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro.

Only economic operators shall be eligible:

- large enterprises/small or medium enterprises (SMEs) which have registered in their Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: “Production and supply of electricity and thermal energy, gas, hot water and air conditioning”. This shall be proved based on the confirmation of company’s details issued by the Trade Register.

The project cumulatively meeting the following criteria shall be eligible:

- the feasibility study is drafted by copying the provisions of GD No 28/2008 on the approval of framework content of the public investments related technical economic documentation as well as the structure and methodology for the drafting of the general estimate for investment objectives and intervention works;
- it proves the investment’s utility and efficiency within the section “cost- benefit analysis” of the feasibility study;
- it proves, by economic and financial calculations, that following the project implementation the consumption of energy obtained from conventional sources shall be reduced;
- the feasibility study contains the necessary information for the technical and financial assessment of the project, including risk analysis and financial indicators such as: investment recovery deadline, cash flow cumulated each year, cash flow following the project implementation completion, investment cost - Euro/kW, value of the financial profitability internal rate;
- project related costs are detailed per each expenditure category;
- it complies with national and Community provisions on environmental protection and State aid;
- the production capacity of the energy unit shall not exceed 10 MW.

The granted financing shall represent maximum 50% of the total eligible value of the project for the entire Romanian territory, except for the case when the beneficiary's registered office or working point where the project is implemented is located within the Bucharest – Ilfov Region, situation in which the granted financing shall represent maximum 40% of the total eligible value of the project without exceeding the maximum amount to be granted to a beneficiary within the financing session. These ceilings shall apply for the total amount financed by EFA for projects benefiting from State aid.

The maximum amount to be granted for a project within the financing session is of 30 mil. lei.

b) Is it a voluntary or obligatory scheme?

The financing from the Environment Fund of projects for the production of energy from renewable energy sources may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The Programme is managed by the Environment Fund Administration (EFA) coordinated by the Ministry of Environment and Forests (MES) which manages the Environment Fund.

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with contractual provisions and shall monitor the projects implementation results on a period of 5 respectively 3 years from the project completion for SMEs.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The Programme financing shall be performed from the Environment Fund revenues. The Environment Fund revenues are public revenues and consist in fees and contributions having the same legal status as taxes, fees, contributions and other amounts owed to the general consolidated budget.

The Programme may be annually developed within the limit of funds allocated to this effect through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

(e) How is long-term security and reliability addressed by the scheme?

The purpose of the financing scheme is to develop the market of energy production technologies from renewable sources in Romania and it therefore contributes to the energy supply security and reliability.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is not revised while only the allocated funds are annually revised depending on the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

(g) Does support differ according to technology?

The support does not differ according to technology.

(h) What are the expected impacts in terms of energy production?

The impact of the energy production cannot be assessed since the number of projects per each financing session depends on the size of funds annually allocated from the Environment Fund budget.

(i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is the Ministry of Environment Order No 1342/2009 for the approval of the Financing Guide of the "Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro as well as the legislation on the organisation and operation of EFA and the Environment Fund.

(l) What start and end dates (duration) are set for the whole scheme?

This financing programme entered in force in 2009 together with the approval of the Financing Guide by Environment Ministry No 1342/2009. No scheme end date is specified.

(m) Are there maximum or minimum sizes of system which are eligible?

In order for a project to be eligible, the production capacity of the energy unit shall not exceed 10 MW.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

It shall be not accepted for the State aid granted within the Programme to be cumulated with other State aids or other Community or national funds which are granted in relation to the same eligible costs if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

Moreover, the State aid granted within this Programme cannot be cumulated with a minimis aid granted based on the legislation on minimis aid in force when it is granted in relation to the same eligible costs or investment project if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are regional schemes. Such schemes were previously described.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The Programme on the production of energy from renewable sources grants non-refundable funds from the Environment Fund for the performance of investments.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

This Programme shall be addressed only to economic operators:

- large enterprises/small or medium enterprises (SMEs) which have registered in their Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: "Production and supply of electricity and thermal energy, gas, hot water and air conditioning". This shall be proved based on the confirmation of company's details issued by the Trade Register.

There is no specified scheme for certain technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Financing sessions shall be annually organised depending on the size of funds allocated from the Environment Funds for this Programme.

B.3. The Programme on the increase of energy production from renewable sources

Regulation

(a) What is the legal basis for this obligation/target?

Any financing granted from the Environment Fund shall comply with State aid applicable legislation. The financing shall be performed based on the scheme developed in accordance with Commission Regulation No 1628/2006 on the application of Articles 87 and 88 of the Treaty establishing the EC or based on the European Commission Decision issued following the notification transmitted by EFA.

Other legislation constituting legal basis for this Financing Programme:

- GEO No 196/2005 on the Environment Fund approved by Law No 105/2006 as subsequently amended and supplemented (Law No 292/2007, GEO No 37/2008 and GEO No 25/2008);
- GD No 1/2006 on the Regulation on the organisation and operation of EFA, amended by GD No 832/2008;
- Ministry of Environment and Forests Order No 714/2010 on the approval of the Financing Guide of the Programme on the increase of energy production from renewable sources.

(b) Are there any technology-specific targets?

There are no technology-specific targets.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets (per technology).

The purposes of the Programme consist in:

- use of renewable energy resources: solar, wind power, hydro-energy, geothermal, biomass, biogas, gases resulted from waste/mud fermentation within treatment plants for the production of electricity and/or thermal energy;
- improvement of environment quality;
- reduction of greenhouse gas emission;
- rational and efficient use of primary energy resources;
- maintenance and protection of ecosystems.

In order to achieve the proposed aims, the Programme's targets are the following:

- commissioning of new capacities of energy production from renewable sources;
- economic development of regions where investments are performed;
- meeting the needs of electricity and heating in less favoured areas;
- production of green energy and meeting environmental standards by reduction of pollution;
- reduction of dependence on imports of primary energy resources (mainly fossil fuels) and improvement of supply safety;
- environment protection by reducing polluting emissions and fighting climate change;
- contribution to the achievement of the strategic target of Romania, namely the share of electricity produced from RES of the total gross electricity consumption to be of 33% in 2010, 35% in 2015 and 38% in 2020.

(d) Who has to fulfil the obligation?

Projects proposed by eligible financial support applicants (large enterprise/medium or small enterprises and economic operators which have registered in their Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: "Production and supply of electricity and thermal energy, gas, hot water and air conditioning") shall contribute to the achievement of the Programme's targets. Moreover, the financing contract provisions shall be complied with during the projects implementation.

(e) What is the consequence of non-fulfilment?

Non-fulfilment by the beneficiary of any of the obligations undertaken under the financing contract shall constitute a defaulting case. In such situation, EFA shall notify the beneficiary within maximum 5 days from the finding of a defaulting case and if deficiencies specified in the notification are not remedied within maximum 30 days from the notification date, EFA shall be entitled to take the following measures without delay and without fulfilling any prior formality:

- temporary cease of the financing use until the causes entailing the cease are remedied;
- final cease and unilateral termination, without the fulfilment of any prior formality, of the financing contract including the recovery of the amounts

transferred to the beneficiary under the conditions of the Fiscal Procedure Code/Civil Procedure Code.

(f) Is there any mechanism to supervise fulfilment?

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with contractual provisions and shall monitor the results of the implementation of the projects over a period of 5 years (3 years for SMEs) from the project completion.

During the monitoring period established under the financing contract, the beneficiary shall draft and submit, every 6 months from the completion of the project, a report on the functionality and performance of activities for the achievement of the target set in the project.

The personnel monitoring the project shall perform control visits at the site where the project was implemented in order to check the physical status of the project implementation.

The granted non-refundable financing shall be recovered if the financed objectives are not used in accordance with the set purpose and if the objectives have been sold, rented, pledged or mortgaged during the project development or following the project completion, for a period of 5 years for large enterprises and 3 years for SMEs.

(g) Is there any mechanism to modify obligations/targets?

No mechanisms to modify obligations/targets are known.

Financial support

(a) What is the name and a short description of the scheme?

The “**Programme on the increase of energy production from renewable sources**” supplements the “**Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro**”. The Programme’s object is represented by non-refundable financing from the Environment Fund of projects aiming at the production of energy from renewable sources: wind power, solar, biomass, hydro and geothermal.

The applicant cumulatively meeting the following conditions shall be eligible:

- it is a Romanian legal person carrying out business activities in Romania;
- it has been operating and carrying out business activities for at least 6 months upon the submission of the financing file and it has at least one concluded financial year;
- it has registered in its Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: “Production and supply of electricity and thermal energy, gas, hot water and air conditioning”. This shall be proved based on the confirmation of company’s details issued by the Trade Register;
- it is owner, manager, concessionaire or tenant/lessee having a lease on the building on/in which the project shall be implemented and on the land on which water supply systems for micro hydropower plants shall be installed; the land shall be unencumbered and shall not be subject to any dispute pending before a court of law, any recovery of possession pursuant to a special law or the common law and any expropriation procedure for public utility purpose;

- it is not subject to insolvency or bankruptcy, its business activities are not suspended, it is not subject to any dissolution or winding-up procedure or forced sale and/or similar situations;
- it has no outstanding obligation to the State budget, local budgets, the Environment Fund budget in accordance with national legislation in force;
- it has not breached legal provisions while performing its activity prior to the project initiation and it does not sponsor activities having a negative effect on the environment;
- it does not benefit and shall not benefit from financing from other public and/or European funds for the same eligible expenditure of the project if the State aid intensity exceeds 50%;
- it holds all agreements, notices, authorisations and approvals required by the feasibility study.

The project which cumulatively meets the following criteria shall be eligible:

- the feasibility study is drafted by copying the provisions of GD No 28/2008 on the approval of framework content of the public investments related technical economic documentation as well as the structure and methodology for the drafting of the general estimate for investment objectives and intervention works;
- the technical project is drafted in accordance with provisions of GD No 28/2008 and Ministry of Development, Public Works and Dwelling Order No 863/2008 on the approval of Application Instructions for provisions of GD No 28/2008 on the approval of framework content of the public investments related technical economic documentation as well as the structure and methodology for the drafting of the general estimate for investment objectives and intervention works, as subsequently amended and supplemented; the total investment value, as results from the technical project, shall not exceed the total investment value presented in the feasibility study (general estimate) and the financing application;
- the feasibility study contains the necessary information for technical and financial assessment of the project, including financial indicators, namely the cost-benefit analysis is drafted in accordance with GD No 28/2008; it proves the investment's utility and efficiency within the section "cost- benefit analysis" based on the economic analysis (irrespective of the investment value); the discount rate recommended for the financial analysis is of 5% and of 5.5% for the economic analysis;
- the project's costs are detailed for each category of expenditure;
- it complies with national and Community provisions on environmental protection and State aid in accordance with the affidavit included in the financing application;
- the project aims at the performance of an initial investment, namely an investment in tangible and intangible assets in connection to the establishment of a new unit, the extension of an existing unit, diversification of an unit's production by manufacturing new additional products and the essential change of the production process within an existent unit;
- the project implementation duration does not exceed 36 months.

The granted financing shall represent maximum 50% of the total eligible value of the project for the entire Romanian territory, except for the case when the beneficiary's registered office or working point where the project is implemented is located within the Bucharest – Ilfov Region, situation in which the granted financing shall represent maximum 40% of the total eligible value of the project without exceeding the maximum amount to be granted to a beneficiary within the financing session. These

ceilings shall apply for the total amount financed by EFA for projects benefiting from State aid.

The maximum amount to be granted for a project within the financing session is of 30 mil. lei.

b) Is it a voluntary or obligatory scheme?

The financing from the Environment Fund of projects for the production of energy from renewable energy sources may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The Programme is managed by the Environment Fund Administration (EFA) coordinated by the Ministry of Environment and Forests (MES) which manages the Environment Fund.

The Implementation – Monitoring Service of EFA shall check the project implementation method used by the financing beneficiaries in accordance with contractual provisions and shall monitor the projects implementation results on a period of 5 respectively 3 years from the project completion for SMEs.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The Programme financing shall be performed from the Environment Fund revenues. The Environment Fund revenues are public revenues and consist in fees and contributions having the same legal status as taxes, fees, contributions and other amounts owed to the general consolidated budget.

The Programme may be annually developed within the limit of funds allocated to this effect through the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

(e) How is long-term security and reliability addressed by the scheme?

The purpose of the financing scheme is to develop the market of energy production technologies from renewable sources in Romania and it therefore contributes to the energy supply security and reliability.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is not revised while only the allocated funds are annually revised depending on the annual income and expenditure budget of the Environment Fund Administration and the Environment Fund approved by Government Decision.

(g) Does support differ according to technology?

The support does not differ according to technology.

(h) What are the expected impacts in terms of energy production?

The impact of the energy production cannot be assessed since the number of projects per each financing session depends on the size of funds annually allocated from the Environment Fund budget; however, there is the tendency, by developing such projects, to contribute to the achievement of the strategic target of Romania, namely the share of electricity produced from RES of the total gross electricity consumption to be of 33% in 2010, 35% in 2015 and 38% in 2020.

(i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is the Ministry of Environment Order No 714/2010 for the approval of the Financing Guide of the "Programme on increase of energy production from renewable sources as well as the legislation on the organisation and operation of EFA and the Environment Fund.

(l) What start and end dates (duration) are set for the whole scheme?

This financing programme entered in force in 2010 together with the approval of the Financing Guide by Environment Ministry No 714/2010. No scheme end date is specified. The amount granted for the current financing session is of 440,000 thousand lei while the maximum amount to be granted for one project, within the financing session is of 30 mil. lei.

(m) Are there maximum or minimum sizes of system which are eligible?

In order for an investment project in a hydroelectric unit to be eligible, the installed power of the said unit shall be under or equal to 10 MW. For the other types of project, no maximum or minimum sizes of system are set in order to make it eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

It shall be not accepted for the State aid granted within the Programme to be cumulated with other State aids or other Community or national funds which are granted in relation to the same eligible costs if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

Moreover, the State aid granted within this Programme cannot be cumulated with a minimis aid granted based on the legislation on minimis aid in force when it is granted in relation to the same eligible costs or investment project if such accumulation generates a State aid intensity which exceeds the permitted maximum gross intensity stipulated in the European Commission Regulation.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are regional schemes. Such schemes were previously described.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The Programme on the production of energy from renewable sources grants non-refundable funds from the Environment Fund for the performance of investments.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The applicant cumulatively meeting the following criteria shall benefit from this scheme:

- it is a Romanian legal person carrying out business activities in Romania;
- it has been operating and carrying out business activities for at least 6 months upon the submission of the financing file and has it has at least one concluded financial year;
- it has registered in its Articles of Association the activity related to electricity and/or thermal energy production, corresponding to Division 35 of NACE codes: "Production and supply of electricity and thermal energy, gas, hot water and air conditioning". This shall be proved based on the confirmation of company's details issued by the Trade Register;
- it is owner, manager, concessionaire or tenant/lessee having right of superficies on the building on/in which the project shall be implemented and on the land on which water supply systems for micro hydropower plants shall be installed; the land shall be unencumbered and shall not be subject to any dispute pending before a court of law, any recovery of possession pursuant to a special law or the common law and any expropriation procedure for public utility purpose;
- it is not subject to insolvency or bankruptcy, its business activities are not suspended, it is not subject to any dissolution or winding-up procedure or forced sale and/or similar situations;
- it has no outstanding obligation to the State budget, local budgets, the Environment Fund budget in accordance with national legislation in force;
- it has not breached legal provisions while performing its activity prior to the project initiation and it does not sponsor activities having a negative effect on the environment;
- it does not benefit and shall not benefit from financing from other public and/or European funds for the same eligible expenditure of the project if the State aid intensity exceeds 50%;
- it holds all agreements, notices, authorisations and approvals required by the feasibility study.

There is no scheme specified for certain technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Financing sessions shall be annually organised depending on the size of funds allocated from the Environment Funds for this Programme.

C. Financing through the “National programme for increasing energy efficiency and use of renewable energy sources in the public sector for 2009-2010”

Regulation

(a) What is the legal basis for this obligation/target?

The legal basis of this Financing Programme is represented by GD 1661/2008 as subsequently amended and approving the “National programme for increasing energy efficiency and use of renewable energy sources in the public sector for 2009-2010”. The regulation on selection of applicants was approved by MEF Order 3722/2008.

(b) Are there any technology-specific targets?

There are no technology-specific targets.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets (per technology).

The 2009-2010 National Programme provides financial support through non-refundable co-financing from the state budget for the following types of investment objectives:

- Rehabilitation and modernisation of centralised thermal energy supply systems, including the change of the type of fuel for energy combustion installation (for example, the replacement with biomass);
- Thermal rehabilitation of public buildings and use of local RES potential for the supply of electric and/or thermal energy (projects with a strong social and economic impact);
- Modernisation of indoor and outdoor public lightning.

For all types of abovementioned investment objectives, technical solutions adopted within feasibility studies associated to investment objectives shall be characterised by the introduction of modern and performant technologies and equipments successfully applied in Romania or other countries of the European Union. The implementation of projects shall lead to the increase of operational reliability and the provision of energy parameters as favourable as possible (high energy efficiencies, reduced specific energy consumption etc.).

(d) Who has to fulfil the obligation?

Projects proposed by eligible financial aid applicants, authorities of public local administration which have to meet the Programmes requirements, namely, increase of energy efficiency and use of renewable energy resources for all the types of the abovementioned investment objectives. Moreover, the financing contract provisions shall be complied with during implementation.

(e) What is the consequence of non-fulfilment?

Specific legislation does not provide for consequences of obligations non-fulfilment.

(f) Is there any mechanism to supervise fulfilment?

The competent authority for the implementation of the 2009-2010 National Programme is ARCE/ANRE. On the entire duration of the 2009-2010 National Programme, this authority monitors the performance of investment works supported through co-financing and checks how the co-financing funds are used for the intended purpose.

(g) Is there any mechanism to modify obligations/targets?

The Programme is on a short term (2009-2010) and no mechanisms to modify obligations/targets are provided for.

Financial support

(a) What is the legal basis for this obligation/target?

The “**National programme for increasing energy efficiency and use of renewable energy sources in the public sector for 2009-2010**” provides financial support through non-refundable co-financing from the state budget for the following types of investment objectives:

- Rehabilitation and modernisation of centralised thermal energy supply systems, including the change of the type of fuel for energy combustion installation (for example, the replacement with biomass);
- Thermal rehabilitation of public buildings and use of local RES potential for the supply of electric and/or thermal energy (projects with a strong social and economic impact);
- Modernisation of indoor and outdoor public lightning.

For the Programme financing, it was initially provided for the allocation of 32.9 million lei for 2009, respectively 40 million lei for 2010 from the State budget. The amounts have been subsequently reduced to 22.3 million lei for 2009, respectively 11 million lei for 2010 on account of budgetary difficulties occurred during the economic crisis period.

The three types of eligible investment objectives benefit from the following percentage allocation from the total amounts:

- 40% for CTESS (centralised thermal energy supply system) rehabilitation and modernisation, including the change of the type of fuel for energy combustion installation (for example, the replacement with biomass);
- 40% for thermal rehabilitation of public buildings and use of local RES potential for the supply of electric and/or thermal energy (projects with a strong social and economic impact) including for the reimbursement of the 50% quota of costs including VAT associated to the performance of public buildings energy audit based on which the thermal rehabilitation investment project was developed;
- 20% for modernisation of indoor and outdoor public lightning.

Eligibility conditions for applicants and investment projects are the following:

- the initiator and the beneficiary of the investment project shall a local authority which must comply with public procurement regulations;
- the substantiation of the investment project shall be performed through a feasibility study approved by the local authority in compliance with the local energy strategy;
- the beneficiary shall make the prove that it allocates financial sources from the local budgets or it accesses other financing sources covering a certain amount

of the value of the project or project stage for which the co-financing is required, namely:

- Y minimum 70% for CTESS rehabilitation and modernisation works, respectively for indoor and outdoor public lightning modernisation works;
- Y minimum 50% for public buildings thermal rehabilitation works.

b) Is it a voluntary or obligatory scheme?

The financing through the “**National programme for increasing energy efficiency and use of renewable energy sources in the public sector for 2009-2010**” may be deemed as voluntary since the financing is granted for projects following the voluntary participation of applicants in the project selection process which purpose is the eligibility of a limited number of projects for financing. However, the financing scheme is obligatory due to clear conditions to be met by the applicants and the projects participating in the financing competition.

c) Who manages the scheme? (Implementing body, monitoring authority)

The competent authority for the implementation of the 2009-2010 National Programme is ARCE/ANRE, capacity in which it executes the specialised technical analysis for determining the eligibility of projects and for their selection based on technical economic criteria. Moreover, it collects data on investment projects and monitors their implementation on the entire duration of works performance as well as following commissioning in order to achieve project parameters.

On the entire duration of the 2009-2010 National Programme, this authority monitors the performance of investment works supported through co-financing and checks how the co-financing funds are used for the intended purpose.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The financial support for the projects co-financing shall be provided from the State budget through the Ministry of Economy's budget by performing transfers between divisions of the public administration.

(e) How is long-term security and reliability addressed by the scheme?

The implementation of projects shall lead to the increase of operational reliability and the provision of energy parameters as favourable as possible (high energy efficiencies, reduced specific energy consumption etc.).

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme has been periodically revised by Law on State budget in relation to the allocated amounts. The allocation of 32.9 million lei for 2009, respectively 40 million lei for 2010 has been initially provided for financing the Programme pursuant to GD 1661/2008.

The amounts have been subsequently reduced to 22.3 million lei for 2009, respectively 11 million lei for 2010 on account of budgetary difficulties occurred during the economic crisis period.

If the co-financing amounts associated to investment works selected depending on the three types of objectives do not fully cover the amounts available according to the percentage allocation at the end of the investment works selection period, the implementing authority shall guarantee the full use of unconsumed financial resources through the additional selection of eligible investment projects and the transfer of the remaining available amounts from one type of works to the another within the limit of the amounts in question.

(g) Does support differ according to technology?

The support does not differ according to technology.

(h) What are the expected impacts in terms of energy production?

The impact on energy production cannot be currently assessed.

(i) Is support conditional on meeting energy efficiency criteria?

The support granted through the 2009-2010 National Programme mainly aims at increasing energy efficiency in the public sector.

It is stipulated that the promotion of RES use in order to provide the necessary thermal energy shall result in the increase of energy efficiency within the applicable investment objectives.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is the GD No 1661/2008 on the approval of the “**National programme for increasing energy efficiency and use of renewable energy sources in the public sector for 2009-2010**”. The scheme became operational in 2009.

(l) What start and end dates (duration) are set for the whole scheme?

The support granted through the 2009-2010 National Programme shall be valid only for 2009 and 2010.

(m) Are there maximum or minimum sizes of system which are eligible?

No maximum or minimum sizes of system are set in order to make it eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

It shall be not accepted for the State aid granted within the Programme to be cumulated with other State aids or other Community or national funds which are granted in relation to the same eligible costs.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are no regional/local schemes.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The presented support scheme consists in the granting of a non-refundable financing from the State budget for co-financing investment projects on the increase of energy efficiency and RES use.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The direct beneficiaries of the scheme are the authorities of the public local administration. There is no specified scheme for certain technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

The support scheme within the 2009-2010 National Programme has a duration of two years (2009 -2010). There are calls in the first part of the period in question.

4.4.4 Financing through the “District heating 2006-2015 – heat and comfort” programme

Regulation

(a) What is the legal basis for this obligation/target?

The legislative acts constituting the legal basis for this Financing Programme are:

- GD No 462/2006 for the approval of the “District heating 2006-2015 – heat and comfort” programme and the establishment of the Project Management Unit, as subsequently amended and supplemented;
- GD No 750/2005 on the establishment of permanent inter-ministerial committees;
- Minister of Interior and Administrative Reform Order (currently referred to as the Minister of Administration and Interior) No 471/2008 on the approval of Regulation on the implementation of the “District heating 2006-2015 – heat and comfort” programme.

(b) Are there any technology-specific targets?

There are no technology-specific targets.

(c) What are the specific obligations/targets per year (per technology)?

There are no annual specific obligations/targets (per technology).

The targets of the programme are the following:

- significant reduction of thermal energy costs associated to heating and preparation of domestic hot water for all consumers connected to centralised

thermal energy supply systems by increasing the efficiency of such systems and improving the service quality;

- reduction of primary energy resources consumption with at least 1 million Gcal/an (approximately 100000 toe/year) in relation to the consumption of primary energy resources used to supply thermal energy for the population in 2004;
- annual energy efficiencies of heating agent production units shall be of at least 80% and 70% for units which will use biomass as primary energy resource correlated with provisions of GD No 219/2007 on the promotion of co-generation based on the useful thermal energy;
- reduction of technological losses within the primary heat transmission networks and the distribution networks up to a value of 15% of the transferred quantity of energy;
- local use of renewable resources potential in order to cover the thermal energy demand of the population and the replacement or reduction of expensive or deficit fuels;
- reduction both of polluting emissions in the habitable urban area which are generated by individual sources of thermal energy and the global pollution by reducing greenhouse gas emissions.

(d) Who has to fulfil the obligation?

It is intended to achieve these targets upon the completion of CTESS modernisation works through the “District heating 2006-2015 – heat and comfort” programme.

(e) What is the consequence of non-fulfilment?

Specific legislation does not provide for consequences of obligations non-fulfilment.

(f) Is there any mechanism to supervise fulfilment?

The management of the “District heating 2006-2015 – heat and comfort” programme shall be performed by the Management Unit of the “District heating 2006-2015 – heat” project within the Ministry of Administration and Interior. The local implementation and monitoring of the programme as well as the coordination of activities related to the performance of investments shall be carried out by public local administrations.

(g) Is there any mechanism to modify obligations/targets?

The “District heating 2006-2015 – heat and comfort” programme is coordinated by an inter-ministerial commission organised according to GD No 750/2005 on the establishment of permanent inter-ministerial committees coordinated by the Inter-ministerial Committee for economic problems, fiscal and commercial policies, internal market, competitiveness, business environment. The regulation may be amended or supplemented at the suggestion of the Management Unit of the “District heating 2006-2015 – heat” project with the approval of the inter-ministerial commission.

Financial support

(a) What is the name and a short description of the scheme?

The “District heating 2006-2015 – heat and comfort” programme finances investments in:

- rehabilitation of the centralised thermal energy supply system:
 - Y heat production unit(s);
 - Y primary heat transmission network (hot water);
 - Y district heating units or thermal modules at building level where such installations can be justified from economic point of view;
 - Y hot water and heating agent distribution network;
- thermal rehabilitation of buildings:
 - Y interior hot water and heating agent supply network of the building;
 - Y individual metering accompanied by thermostatic valves;
 - Y rehabilitation of buildings thermal insulation, namely frontages, terraces and exterior woodwork.

The programme’s beneficiaries are authorities of public local administration which own district heating systems or parts thereof.

In order to be eligible, the modernisation projects for the centralised thermal energy production, transmission and distribution system shall meet the following requirements:

- to aim at the modernisation of CTESS eligible components, in compliance with the obligatory minimum performances provided for in the “District heating 2006-2015 – heat and comfort”, Chap. III, approved by GD No 462/2006, namely:
 - Y the necessary thermal energy shall be provided as follows:
 - o the consumption curve peak – through equipment producing peak heating agent;
 - o the consumption during the urban heating supply period – through co-generation installation with a capacity able to sustain thermal consumption variation of +/- 10% of the rated capacity;
 - o the consumption for the supply of domestic hot water - through co-generation installation with a capacity able to sustain thermal consumption variation of +/- 10% of the rated capacity;
 - Y the annual energy efficiency of the heat production unit (thermal energy + electricity discharged for use)/primary energy resources consumed for the production of thermal energy and electricity to be of at least 80%; only production units using biomass as primary energy resource and which the total energy efficiency shall be of at least 70% may constitute an exception;
 - Y the reduction of technological losses within the primary heat transmission and distribution networks at values under 15%;
 - Y the increase of energy efficiency of thermal substations;
 - Y the use of thermal modules in buildings, in cases where it can be economically justified;
 - Y metering at building and thermal substation level;
 - Y reduction of thermal energy and water losses within the interior networks of buildings;
 - Y individual metering and installation of thermostatic valves for final consumers;
 - Y introduction of automation and dispatching systems in order to ensure permanent monitoring and control of installations operation within optimum parameters from production to user.
- to present solutions corresponding to principles and content of the National strategy on thermal energy supply for localities by means of centralised production and distribution systems, approved by GD 882/2004, the Romanian Energy Strategy for the 2007-2020 period, approved by GD 1069/2007, the

Strategy on use of renewable energy sources approved by GD 1535/2003, the National strategy on energy efficiency approved by GD 163/2004 and GO 22/2008 on energy efficiency and promotion of use of renewable energy sources by end consumers;

- to comply with European environmental standards transposed in applicable national legislation by GD 541/2003 on the establishment of measures for limiting air emissions of certain pollutants resulting from large combustion installations, as subsequently amended and supplemented, GD 349/2005 on waste landfilling, as subsequently amended, GEO 152/2005 on integrated pollution prevention and control approved as amended and supplemented by Law 84/2006, GD 780/2006 establishing the trading scheme for greenhouse gas emissions certificates;
- the investment substantiation to be performed through a feasibility study correlated with the local strategy of thermal energy supply of locality and their own energy efficiency programme;
- to be executed within a period included in the 2008-2015 interval and an investment works progress schedule to be attached thereto;
- for the drafting or updating of local strategies and feasibility studies, where applicable, to comply with requirements contained in GD 28/2008 on the approval of framework content of the public investments related technical economic documentation as well as the structure and methodology for the drafting of the general estimate for investment objectives and intervention works;
- the CTESS modernisation works execution order to be from consumer to source.

The allocation percentage of the amounts representing the co-financing part has been established by the inter-ministerial commission as follows:

- maximum 70% from the State budget and 30% from the local budget of the total value of the investment project in new thermal energy production sources that use renewable resources;
- maximum 60% from the State budget and 40% from the local budget of the total value of the investment project, for localities with revenues under 100 million lei;
- maximum 50% from the State budget and 50% from the local budget of the total value of the investment project, for localities with revenues under 200 million lei and over 100 million lei;
- maximum 40% from the State budget and 60% from the local budget of the total value of the investment project, for localities with revenues over 200 million lei.

The amounts granted from the State budget through the Ministry of Administration and Interior's budget within the District heating 2006-2015 – heat and comfort” programme shall not constitute State aid, the beneficiaries (authorities of the public local administration) being under the obligation to meet the following cumulative conditions:

- investments to be performed by the authority of the public local administration as owner of CTESS and not by the operator delegated to provide the public service even if the local administration authority is the shareholder of the operator in question;
- the granted amounts to be managed directly by the local authority for achieving investment objectives fully owned by the said authority;
- the granted amounts shall be used exclusively through the income and expenditure budget of administrative and territorial divisions;

- legal provisions on public procurement to be complied with upon the contracting of investment works.

b) Is it a voluntary or obligatory scheme?

It is an obligatory scheme.

c) Who manages the scheme? (Implementing body, monitoring authority)

The management of the “District heating 2006-2015 – heat and comfort” programme shall be performed by the Management Unit of the “District heating 2006-2015 – heat” project within the Ministry of Administration and Interior. The local implementation and monitoring of the programme as well as the coordination of activities related to the performance of investments shall be carried out by public local administrations.

(d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The funds granting from the State budget shall be performed through the budget of the Ministry of Administration and Interior, namely the budget of the Ministry of Development, Public Works and Dwellings (currently referred to the Ministry of Regional Development and Tourism) based on projects approval by the Inter-ministerial Commission for the coordination of the “District heating 2006-2015 – heat and comfort” programme.

For the component “Rehabilitation of the centralised thermal energy supply system”, the programme’s financing shall be performed during a period of 8 years while the funds allocated from the State budget, reaching a total amount of 2120 million lei, shall be scheduled for the programme development period in annual instalments of 265 million lei starting with 2008 and until 2015.

(e) How is long-term security and reliability addressed by the scheme?

The investment substantiation shall be performed through a feasibility study correlated with the local strategy of thermal energy supply of locality and its own energy efficiency programme. Upon the drafting of thermal energy supply strategies the following considerations on renewable resources and environmental protection shall be taken into account:

- the use of all types of energy resources such as: biomass, biodegradable waste, waste incineration and co-incineration;
- the reduction of pollution with the possibility to control exhausts/emissions, to eliminate liquid storage of slag and ash resulting from charring and to reduce the landfilling areas for waste resulted from fossil fuel (coal) combustion by using the best available techniques (BAT) for energy production;
- the energy potential resulted from projects of extracting the biogas resulting from the existent municipal storages.

(f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

The scheme is not periodically revised.

(g) Does support differ according to technology?

The support does not differ according to technology.

(h) What are the expected impacts in terms of energy production?

The impact on energy production cannot be currently assessed.

(i) Is support conditional on meeting energy efficiency criteria?

The granted support is conditional on meeting energy efficiency criteria.

(j) Is it an existing measure? Could you please indicate national legislation regulating it?

The scheme is an existing measure. The legislation regulating the scheme is GD 462/2006 for the approval of the "District heating 2006-2015 – heat and comfort" programme and the Minister of Administration and Interior Order No 471/2008 on the approval of the Regulation for the implementation of the "District heating 2006-2015 – heat and comfort" programme.

(l) What start and end dates (duration) are set for the whole scheme?

The support granted through the "District heating 2006-2015 – heat and comfort" programme shall be valid only for projects developed during the 2008 – 2015 period.

(m) Are there maximum or minimum sizes of system which are eligible?

No maximum or minimum sizes of system are set in order to make it eligible.

(n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

The financing of projects included in the "District heating 2006-2015 – heat and comfort" programme has two components:

- the amounts representing the financing part from local budgets of administrative and territorial divisions which can be:
 - Y the administrative and territorial divisions' own resources stipulated in the local budget;
 - Y bank loans contracted by administrative and territorial divisions;
 - Y non-refundable funds, other than those obtained from the State budget by the administrative and territorial divisions;
- the amounts granted from the State budget through the Ministry of Administration and Interior's budget representing the co-financing.

(o) Are there regional/local schemes? If so, please detail using the same criteria.

There are no regional/local schemes.

Specific questions for financial support for investment:

(a) What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)

The presented support scheme consists in the granting of a financing from the State budget for co-financing investment projects on the rehabilitation of the centralised thermal energy supply system and the thermal rehabilitation of buildings.

(b) Who can benefit from this scheme? Is it specified for certain technologies?

The beneficiaries of the programme are the authorities of the public local administration owning district heating systems or parts thereof. There is no specified scheme for certain technologies.

(c) Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?

Applications are continuously received and granted. The stages necessary to be covered for accessing the “District heating 2006-2015 – heat and comfort” programme are the following:

- drafting or updating of local strategies for thermal energy supply of the locality under the conditions contained in the regulation for the programme implementation. Only strategies drafted/updated starting with 2007 and with a time interval of minimum 10 years shall be considered;
- approval of the local strategy for thermal energy supply of the locality by the Local/County Council;
- drafting or updating of feasibility studies in accordance with legal provisions;
- approval of feasibility studies by the Local/County Council;
- submission with the Ministry of Administration and Interior, the Project Management Unit (PMU) of the project documentation for obtaining the financing (financing application, strategy for the thermal energy supply of the locality, feasibility study, decisions issued by the local authority for the approval of the thermal energy supply strategy, respectively the feasibility study accompanied by notices granted by the competent regulating authorities – ANRSC and/or ANRE, the investment works annual schedule calendar).
- analysis and approval of the submitted documentation by PMU. PMU may request to the local authority the supplementation or, if applicable, the redrafting of the documentation;
- assessment and prioritisation of eligible documentations by PMU;
- drafting of specialised reports by PMU for each financing request;
- approval/denial of the financing request by the inter-ministerial commission;
- submission of the financing request to public authorities in order to include the amounts in the local income and expenditure budget.

Additional questions:

(a) How are the support schemes for electricity from renewable energy sources adapted to encourage the use of CHP from renewable energy sources?

Within the financing from structural funds (Major Intervention Field 4.2 – “Use of renewable energy resources for the production of green energy”, Priority Axis 4 “Increase of energy efficiency and supply safety, in the context of fighting climate change” within the Sectoral Operational Programme “Increase of Economic

Competitiveness" (SOP IEC) 2007-2013) for projects of producing energy through combustion (CHP or separate production of electricity or thermal energy), the energy content of the annually used primary fuel shall constitute minimum 80% of renewable sources. This condition shall apply to all applicants (enterprises and public local authorities/intercommunity development associations). Moreover, within the "Regional State aid scheme on the use of renewable energy resources", besides the abovementioned condition, the enterprise applicants shall also meet the condition that over 40% of the annual produced electricity and thermal energy to be intended for sale.

(b) What support schemes are in place to encourage the use of district heating and cooling using renewable energy sources?

Support schemes in place to encourage the use of district heating and cooling based on renewable energy sources are:

- the financing scheme from structural funds, without the application of State aid rules – which includes, among the eligible projects, thermal energy production projects (as public utility service or for self-consumption of public institutions financed from the budget of public local authorities);
- the support scheme through the "National programme for the increase of energy efficiency and use of renewable energy sources in the public sector for 2009-2010" which aims at investment works in centralised thermal energy supply systems.
- The "District heating 2006-2015 – heat and comfort" programme financing investments in the rehabilitation of the centralised thermal energy supply system.

(c) What support schemes are in place to encourage the use of small-scale heating and cooling from renewable energy sources?

In order to encourage the use of small-scale heating and cooling from renewable energy sources the Programme on the installation of heating systems using renewable energy, including the replacement or supplementation of classical heating systems (also referred to as the "Green House" Programme) is provided for. It is expected to start in July 2010. Through this programme, natural persons wishing to supplement their traditional heating and hot water systems within their dwellings with alternative ecological installations shall benefit from fixed subsidies from the State and not from an investment percentage as it has been initially announced. Therefore, the State shall allocate the amount of 3 000 lei for installations using woody biomass, 6 000 lei for a solar panel installation and 8 000 lei for heat pumps. These are maximum values and shall not be conditioned by the total investment value.

According to the Minister of Environment, Laszlo Borbely, the Ministry's representatives have already completed the Applicant's Guide for the "Green House" programme which shall be published in the Official Journal. Those wishing to apply for this project shall address to the Environmental Protection Agencies of the County in which they live and submit copies of the Identity Card and the Document of Ownership of the house that shall benefit from the investment as well as a fiscal certificate attesting that the beneficiary has no debts. The system shall be subsequently bought from the free market and installed by a company which shall be no longer necessary to be subject to an approval process. In the end, the beneficiary shall submit the installation invoice and following the check of its authenticity, it shall

receive the subsidy associated to the type of works for which it has opted (e-casaverde.ro).

The budget of the “Green House” programme amounts to 110 million lei with the possibility of being supplemented. The amount shall be distributed to counties depending on the number of inhabitants.

(d) What support schemes are in place to encourage the use of heating and cooling from renewable energy sources in industrial applications?

Among the support schemes in place to encourage the use of heating and cooling from RES we shall mention the following:

- the Regional State aid scheme on the use of renewable energy resources financed by the Environment Fund is intended for economic operators, large, medium and small enterprises within all economic sectors and performing initial investments in any of the 8 development regions of Romania (extensively presented in point 4.4.1.1).
- the “Programme on the production of energy from renewable sources: wind power, geothermal, solar, biomass and hydro” financed by the Environment Fund, the eligible beneficiaries of which are large enterprises/small and medium enterprises and the economic operators that have recorded in the company’s articles of incorporation the activity on the electricity and/or thermal energy production corresponding to division 35 of the NACE codes: “Production and provision of electricity and thermal energy, gas, hot water and air conditioning” (extensively presented in point 4.4.2.2).
- the “Programme on the energy production increase from renewable sources” financed by the Environmental Fund, the eligible beneficiaries of which are large enterprises/small and medium enterprises and the economic operators that have recorded in the company’s articles of incorporation the activity on the electricity and/or thermal energy production corresponding to division 35 of the NACE codes: “Production and provision of electricity and thermal energy, gas, hot water and air conditioning” (extensively presented in point 4.4.2.3).

4.5. Support schemes to promote the use of energy from renewable resources in transport applied by Romania

The State aid scheme “Stimulation of regional development by investing in agricultural and forestry product processing in order to obtain non-agricultural products”

Regulation

a) What is the legal basis for this obligation/target?

The described scheme is regulated by Ministry of Agriculture and Rural Development Order No 12/2010 and developed in compliance with:

- Council Regulation (EC) 1698/2005 on the support for rural development granted from the European Agricultural Fund for Rural Development;
- Commission Regulation (EC) 1974/2006 establishing rules for the application of Regulation (EC) 1698/2005.
- Council Regulation (EC) 1698/2005 on the support for rural development granted from the European Agricultural Fund for Rural Development (EAFRD);
- Commission Regulation (EC) 1974/2006 establishing rules for the application of Council Regulation (EC) 1698/2005
- GD 224/2008 establishing the general framework for the implementation of measures co-financed from the European Agricultural Fund for Rural Development through NRDP 2007 – 2013 as subsequently amended and supplemented;
- GD 651/2006 on the approval of the State Aid Policy for the 2006-2013 period;
- Law No 346/2004 on the stimulation of small and medium enterprises establishment and development as subsequently amended and supplemented;
- GEO 117/2006 on State aid national procedures approved as amended and supplemented by Law No 137/2007;

b) Are there any technology-specific targets?

There are no technology specific targets.

c) What are the specific obligations/targets per year (per technology)?

Not applicable.

d) Who has to fulfil the obligation?

Not applicable.

e) What is the consequence of non-fulfilment?

Not applicable.

f) Is there any mechanism to supervise fulfilment?

Not applicable.

g) Is there any mechanism to modify obligations/targets?

Not applicable.

Financial support:

a) *What is the name and a short description of the scheme?*

“Stimulation of regional development by investing in agricultural and forestry product processing in order to obtain non-agricultural products”

The purpose of the scheme is the regional development of Romania by supporting the development of enterprises performing their activity in any economic sector or development region and investing in:

- processing of agricultural products provided for in Annex 1 to the EC Treaty in order to obtain non-agricultural products,
- primary processing of wood and non-wood forestry products,
- **processing of agricultural products in order to obtain biofuels.**

The general objective of the scheme aims at the improvement of the general performance level of enterprises by increasing competitiveness of enterprises investing in the abovementioned sectors.

Specific objectives aim at:

- introduction and development of new technologies and methods for obtaining new agri-food and forestry products and biofuels;
- increase of quality of obtained products and the obtaining of new competitive products;
- creation of new employments.

The scheme shall address to all enterprises within the 8 development regions of Romania irrespective of the activity sector which:

- perform initial investments in tangible and/or intangible assets within the food industry for the primary processing of forestry products and the production of biofuels;
- meet the eligibility conditions (they are not considered to be in a difficult situation, they are not subject to forced sale procedure, they have no debts towards the State budget and local budgets etc.);

The beneficiary shall bring a financial contribution from its own resources or from enlisted resources unaffected by public aid elements as follows:

- for SMEs: 60% for region 8 Bucharest – Ilfov, respectively 50% for the remaining 7 development regions;
- for large enterprises: 80% for region 8 Bucharest – Ilfov, respectively 75% for the remaining 7 development regions.

The authority managing this scheme is the Ministry of Agriculture and Rural Development (MARD) through the Directorate General for Rural Development – Managing Authority for the National Rural Development Programme (MA NRDP).

The scheme implementation shall be guaranteed through the Paying Agency for Rural Development and Fisheries (PARDF).

The scheme implementation shall be performed in the following stages:

- the launching by PARDF of the announcement of the call for project;
- assessment/selection
 - o acceptance and registrations of applications within PCORDF;
 - o administrative check;
 - o check of the applicant and project eligibility;
 - o projects selection.
- contracting;
- payment:
 - o submission of payment requests;
 - o check of expenditures, payments authorisation and performance.
- monitoring of project implementation

b) Is it a voluntary or obligatory scheme?

The scheme represents a type of aid granted to enterprises defined in general and abstract terms in accordance with the principle established in the Council Regulation (EC) No 659/1999 for the application of Art. 93 of the Treaty establishing the European Communities as subsequently amended.

c) Who manages the scheme? (Implementing body, monitoring authority)

The Ministry of Agriculture and Rural Development (MARD) through the Directorate General for Rural Development – Managing Authority for the National Rural Development Programme (MA NRDP) is the authority managing this scheme while its implementation is guaranteed through the Paying Agency for Rural Development and Fisheries (PARDF).

d) What are the measures taken to ensure availability of necessary budget/funding to achieve the national target?

The projects financing within the scheme shall be guaranteed through NRDP – Measure 123 (namely 80% Community contribution – EAFRD and 20% national contribution from the State budget), with a total allocation amounting to 200 million Euro.

The scheme represents a type of aid granted to enterprises defined in general and abstract terms in accordance with the principle established in the Council Regulation (EC) No 659/1999 for the application of Art. 93 of the Treaty establishing the European Communities as subsequently amended.

The Monitoring Committee for NRDP, called on 2 of March 2010, approved the launching of a project submission session during the period 1 – 30 July 2010 with the allocation of the amount of 99,000,000 Euro.

e) How is long-term security and reliability addressed by the scheme?

Not applicable.

f) Is the scheme periodically revised? What kind of feed-back or adjustment mechanism exists? How has the scheme been optimised so far?

No. The scheme was submitted for EC approval through the specific regular procedure in accordance with EC Decision C (2009)10680

g) Does support differ according to technology?

No differentiations of the support granted depending on the applied technology are provided for.

h) What are the expected impacts in terms of energy production?

The purpose of the scheme is the regional development of Romania by supporting the development of enterprises performing their activity in any economic sector or development region and investing in:

- processing of agricultural products provided for in Annex 1 to the EC Treaty in order to obtain non-agricultural products,
- primary processing of wood and non-wood forestry products,
- **processing of agricultural products in order to obtain biofuels.**

Among other objectives, the Scheme aims at stimulating Romanian economic operators to initiate and/or extend biofuels production, thus contributing to fulfilling the national obligations regarding biofuels promotion. At the same time, the scheme shall lead to the creation of jobs and the identification of new markets for the agricultural production.

i) Is support conditional on meeting energy efficiency criteria?

The support is not conditional on meeting energy efficiency criteria.

j) Is it an existing measure? Could you please indicate national legislation regulating it?

It represents an aid granted in accordance with EC Decision C (2009)10680. We shall mention that it represents a continuation of the State aid scheme XS 13/2008 „*Stimulation of SMEs processing agricultural products in order to obtain food products and SMEs performing agricultural processing activities in order to obtain and use renewable energy sources and biofuels*”.

k) Is this a planned scheme? When would it be operational?

The scheme is a planned scheme. The Monitoring Committee for NRDP, called on 2 of March 2010, approved the launching of a project submission session during the period 1 – 30 July 2010 with the allocation of the amount of EUR 99,000,000.

l) What start and end dates (duration) are set for the whole scheme?

The start day of the scheme is 23 December 2009, the scheme based aid being granted until 31 December 2013.

m) Are there maximum or minimum sizes of system which are eligible?

The eligible value of the project is the equivalent in lei of minimum EUR 5 000. The maximum limit of the non-refundable support granted within the scheme is of EUR 3,000,000/project.

n) Is it possible for the same project to be supported by more than one support measure? Which measures can be cumulated?

The support granted within the National Rural Development Programme for measures and operations cannot be cumulated with any other State aid within the meaning of Art. 87(1) of the Treaty or with another financial support granted by Member States if such accumulation would lead to exceeding the maximum intensity of the support stipulated in Regulation (EC) No 1698/2005.

- o) Are there regional/local schemes? If so, please detail using the same criteria.*

There are no other regional/local schemes.

Specific questions for financial support for investment:

- i. What is granted by the scheme? (subsidies, capital grants, low interest loans, tax exemption or reduction, tax refunds)*

The scheme offers non-refundable support (capital grants) for investments.

- ii. Who can benefit from this scheme? Is it specified for certain technologies?*

The scheme shall be applied to micro-enterprises, small and medium enterprises as well as large enterprises.

The State aid scheme aims at all enterprises within the 8 development regions of Romania, irrespective of the activity sector, which perform initial investments in tangible and/or intangible assets in the food industry for primary processing of forestry products and production of biofuels.

- iii. Are applications continuously received and granted or are there periodical calls? If periodical, could you please describe the frequency and conditions?*

There are periodical calls for submitting financing applications. The first call is scheduled to be performed during the period 1 - 30 July 2010.

- (a) What are the specific obligations/targets per year (per technology)?*

- (b) Is there differentiation of the support according to fuel types or technologies? Is there any specific support to biofuels which meet the criteria of Article 21(2) of the Directive?*

4.6. Specific measures for the promotion of the use of energy from biomass

4.6.1. Biomass supply: both domestic and trade

Table 4.11. Biomass supply in 2006

Sector of origin	Amount of domestic resource	EU imported	Non-EU imported	EU/Non EU exported	Net amount	Primary energy production (ktoe)
A. Biomass from forestry (mil. m³)^(*) of which:	5.5			0.5	5	1.2
1. <i>Direct supply of wood biomass from forests and other wooded land for energy generation</i>	2.5	0	0	0	2.5	0.6
a) fellings	2	0	0	0	2	0.48
b) residues from fellings (tops, branches, bark, stumps)	0.5	0	0	0	0.5	0.12
c) landscape management residues (woody biomass from parks, gardens, tree rows, bushes)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
d) other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2. <i>Indirect supply of wood biomass for energy generation</i>	3	0	0	0.5	2.5	0.6
a) residues from sawmilling, woodworking, furniture industry (bark, sawdust)	0.5	0	0	0	0.5	0.12
b) by products of the pulp and paper industry (black liquor, tall oil)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
c) processed wood-fuel (charcoal)	0.5	0	0	0.25	0.25	0.06
d) post consumer recycled wood (recycled wood for energy generation, household waste wood)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
e) other – residues resulting from wood primary processing, in bulk (chopped, sawdust, shavings, etc.) or processed (briquettes, pellets etc.)	2	0	0	0.25	1.75	0.42
B. Biomass from agriculture and fisheries (mil. tons) of which:	1.9	0	0	0	0	0.817
1. <i>Agricultural crops and fishery products directly provided for energy generation</i>						
a) arable crops (cereals, oilseeds, sugar beet, silage maize)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
b) plantations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
c) short rotation trees	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

d) other energy crops (grasses)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
e) algae	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
f) other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2. Agricultural by-products/processed residues and fishery by-products for energy generation	1.9	0	0	0	0	0.817
a) straw	1.9	0	0	0	0	0.817
b) manure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
c) animal fat	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
d) bone meal and meat	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
e) cake by-products (including oil seed and olive oil cake for energy)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
f) fruit biomass (including shell, kernel)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
g) fishery by product	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
h) clippings from vines, olives, fruit trees	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
i) other						
C. Biomass from waste (mil. tons) of which:	5.47	0	0	0	0	1.391
j) Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas	4.21	0	0	0	0	1.095
1. Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	0.91	0	0	0	0	0.236
2. Sewage sludge	0.35	0	0	0	0	0.060

Source (for biomass from forestry): Ministry of Environment and Forests

^(*)Note: The used aggregate conversion coefficient: 1 mil. m³ = approx. 240 ktoe

Source (for biomass from agriculture): Ministry of Agriculture and Rural Development

Source (for biomass from waste):

1. Ministry of Environment and Forests

2. Report of the Environmental Protection Agency of Bucharest, 2008

3. Report on the Environmental Factors Status in the West Region, 2008

4. Report on the Environment Status in the Centre Region 7, 2008

5. Regional Waste Management Plan in the South Region, 2007

6. Report on the monitoring of the Regional Waste Management Plan in the South-East Region, 2008

7. Regional Waste Management Plan in the South-West Region, 2007

8. National Environmental Protection Agency, Region North-East, 2007

9. Report on the Environmental Factors Status in Region 6 North-West, 2008

Table 4.12. Estimated biomass domestic supply in 2015 and 2020

Sector of origin		2015		2020	
		Expected amount of domestic resource	Primary energy production (ktoe)	Expected amount of domestic resource	Primary energy production (ktoe)
A. Biomass from forestry (mil. m³)	(1) Direct supply of wood biomass from forests and other wooded land for energy generation	3	0.72	3.5	0.84
	(2) Indirect supply of wood biomass for energy generation	3,5	0.84	4	0.96
B. Biomass from agriculture and fisheries (mil. tone)	1. Agricultural crops and fishery products directly provided for energy generation				
	2. Agricultural by-products/processed residues and fishery by-products for energy generation	3.718	1.586	3.762	1.604
C. Biomass from waste	1. Biodegradable fraction of municipal solid waste including biowaste (biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants) and landfill gas	n.a.	n.a.	n.a.	n.a.
	2. Biodegradable fraction of industrial waste (including paper, cardboard, pallets)	n.a.	n.a.	n.a.	n.a.
	3. Sewage sludge	n.a.	n.a.	n.a.	n.a.

Source (for biomass from forestry): Ministry of Environment and Forests

Source (for biomass from agriculture): Ministry of Agriculture and Rural Development

Table 4.13. Current agricultural land use for production of crops dedicated to energy in 2006

Agricultural land use for production of dedicated energy crops	Surface (ha)
1. Land used for short rotation (2-5 years) trees (willows, poplars)	20
2. Land used for other energy crops such as grasses (reed canary grass, <i>Panicum virgatum</i> , <i>Miscanthus</i>), sorghum	n.a.

Source: Ministry of Environment and Forests

4.6.2. Measures to increase biomass availability, taking into account other biomass users (agriculture and forest-based sectors)

Mobilisation of new forestry biomass sources

(a) Please specify how much land is degraded.

It is estimated that at least 3 million ha of the Romanian land intended for agriculture (the equivalent of an area of approx. half of the forest area) constitute lands affected by different processes and in different stages of degradation being improper for agricultural crops under sustainable conditions. A significant part of these lands may be afforested without being necessary the performance of special territorial improvement or land reclaim works and progressively included in the productive forest circuit. The afforestation of degraded lands also brings significant environmental benefits (quantified or non-quantified on the market) such as carbon storage, soil and water protection, maintenance of biodiversity.

(b) Please specify how much unused arable land there is.

The Romanian land intended for agriculture amount to approx. 14.7 mil. ha. Out of this land, an area of approx. 9.5 mil. ha is arable land, approx. 3.3 mil. ha are covered by pastures, approx. 1.5 mil. ha are meadows and the difference of approx. 0.4 mil. ha are covered by vineyards, orchards and other. Out of the arable land, an area of approx. 7.9 mil. ha¹ was cultivated in 2006, the tendency registered in the 2000-2007 period being downwards. Based on this data correlated with the area of pastures and meadows with a production lower than the potential and the extension of degraded lands to the category of agricultural use lands, it results at least 2 mil. ha of unused agricultural land. The increase of the overall agricultural production in Romania during the following period, in accordance with programmes and strategies in force, shall be mainly performed by the increase of competitiveness of agricultural holdings, storage capacity, processing and marketing as well as other measures referring to the production quality on already cultivated lands.

(c) Are any measures planned to encourage unused arable land, degraded land, etc. to be used for energy purposes?

Measure 121 ("Modernisation of agricultural holdings") of the National Rural Development Programme (NRDP) 2007-2013 allows, among other things, the granting of support for establishing crops of short rotation (up to 5 years) forest species and vegetative regeneration (sprouts, root suckers etc.), such as crops of poplars, willows, acacia etc. in order to produce renewable energy.

As regards the afforestation of degraded agricultural lands, there is the "Programme for the improvement of environment quality through the afforestation of degraded agricultural lands" within the Environment Fund while the destination of such projects aiming at the afforestation of such lands is not strictly related to energy.

Budget allocations for the afforestation of degraded lands, which allowed the afforestation of approx. 5 000 ha of degraded lands per year during the 2005-2006 period have significantly decreased in recent years. Following the issuing of Law 46/2008 – the Forestry Code – the special financial resources established by the latter (the Forest Conservation and Regeneration Fund) or by Law No 18/1991 of the Land Fund (Improvement fund of the forestry land fund) for the afforestation of forest

¹ National Institute of Statistics – Statistical Yearbook 2007

lands and degraded lands incorporated in the forest fund, have also decreased. This decrease has been mainly caused by the fact that special laws have been promoted by means of which developers building touristic roads by forest clearance have been exempted from performance of compensatory payments. Such measures had a direct negative effect on the integrity of the current Forestry Fund, the possibility to extent it in the future as well as on the balance of GHG emissions resulting from the forest clearance action (which shall also be compulsorily reported in accordance with the Kyoto Protocol), which could prevent the fulfilment of the emissions reduction engagement undertaken for the 2010 – 2020 period. Such derogations shall be eliminated from the Organic Law (the Forestry Code).

(d) Is energy use of certain already available primary material (such as animal manure) planned?

Current legislation does not contain provisions on the energy use of animal manure.

(e) Is there any specific policy promoting the production and use of biogas? What type of uses are promoted (local, district heating, biogas grid, natural gas grid integration)?

At present, there are no specific measures promoting the production and use of biogas. Biogas is supported by the following laws:

- Law 220/2008 on the establishment of the system for the promotion of energy production from renewable sources, which provides for the granting of 3 green certificates for each 1 MWh supplied within the electricity network by producers generating electricity from biomass, biogas, landfill gas, geothermal energy and associated fuel gas;
- GD 750/2008 for the approval of the Regional State aid scheme on the use of renewable energy resources.

(f) What measures are planned to improve forest management techniques in order to maximise the extraction of biomass from the forest in a sustainable way? How will forest management be improved in order to increase future growth? What measures are planned to maximise the extraction of existing biomass that can already be put into practice?

The increase of the wood biomass amount may be obtained more efficiently through a synergy between forest industries and energy producers. To this effect, the following measures shall be recommended:

a) Improvement of data collection on supply and use of wood biomass

A better knowledge of the available resources amount shall be possible only by maintaining solid data bases which are absolutely necessary for the estimation of biomass potential. There is a crucial need to perform a detailed analysis of the existing biomass potential, both at national and regional level, by taking into account local conditions as well as collection costs, property type, quality requirements, infrastructure and environmental considerations. Moreover, investigations shall be performed on the wood consumption for household energy production, both at national and regional level, in order to obtain a clear image of the energy consumption.

It shall be recommended the periodical (3-5 years) update of data on wood biomass supply and use such as: wood biomass for energy production, fuels resulting from wood processing, recycled wood following the consumption stage and wood waste

flows. Moreover, market analyses shall be performed for the wood biomass-based fuel using a standardised list for commercial statistics and conversion factors (MWh/GJ in m³ of solid wood) in order to increase market transparency.

b) Development of national/regional strategies for the mobilisation of wood biomass potential increase

It shall be necessary the organisation of roundtables, operational groups or similar initiatives comprising relevant market players and stakeholder groups, including of the energy sector, in order to develop, in an integrated manner, strategies for the mobilisation of wood biomass potential increase particularly in the context of certain National Forest Management Programmes.

c) Increase of wood biomass potential for energy

The future of wood biomass supply potential shall be positively influenced by afforestation and reafforestation measures as well as by the active sustainable management of existing forests. Rural development policies shall continue to support such activities.

The measures planned by the Ministry of Environment and Forests for increasing the forest biomass amount intended for energy production and harvested in compliance with forests sustainable management indicators are the following:

- promotion of productive stands in the crop, made of native or exotic species which performance has been checked in time under Romanian conditions (and attainable based on exiting technical standards);
- analysis of practical possibilities to update certain provisions contained in forestry technical standards and allowing the increase of harvest intensity under certain conditions (i.e. the decrease of the exploitability age for the beech tree in forests having a main production role);
- designation of an economic stimulation instrument (State aid scheme) for the harvest and use of wood in difficult to access areas which would otherwise remain in the forest and by the natural elimination process the most part of it would transform in CO₂ emissions;
- integration in the legal circuit of wood mass which is not registered in official records² nu enhancing the institutional capacities (personnel, training, endowments etc.) of forestry administrative and control units;
- full use of forestry biomass, including waste resulting from wood primary processing (i.e. sawdust) through the application of Measure 123 ("Increase the value-added to agricultural and forestry products") of NRDP 2007-2013 or through other measures financed from public funds;
- installation of bio-energy crops of short term tree and shrub species;
- afforestation of agricultural use side lands.

The wood recycled following the consumption stage constitutes a resource insufficiently used so far for the production of energy. Actions shall be taken in order to increase collection, upgrade and use of wood by assessing the potential and by encouraging technological development.

d) Providing sustainable harvest of forest biomass

Romania shall perform changes of experience with more advanced European States in the field of biomass harvesting for energy observing the connections between nature conservation, biodiversity and the strategies for the mobilisation of wood biomass increase.

² Based on the data issued by Ministry of Environment and Forests and resulted from the compilation of data contained in finding documents for contraventions and criminal offences, thorough checks, it results that up to 170000 m³ of wood have been illegally harvested from forests during in recent years (approx. 10% of the annual availability). NIS data (2007) corroborated with NWI (2009), estimating a minimum quantity of 9 mil. m³ of fire wood used for individual stoves in rural area, shall lead us to the conclusion the amount of fire wood originating from primary (forests, other lands) and secondary (processing) is larger.

- e) Development and maintenance under efficiency conditions of the wood biomass supply chains and the markets

Appropriate infrastructure and transport facilities are some of the few basic requirements for the optimum operation of the wood biomass supply chain. Rural development policies shall continue to support the infrastructure development necessary for the harvesting of the entire annual wood potential provided for in forestry systems of measures, considering the fact that the low density of the forest roads network (6.2 m/ha) makes the logging unsustainable from economic point of view in difficult to access areas. To this effect, the implementation of Measure 125 ("Improvement and development of the infrastructure in relation to the development and adjustment of agriculture and forestry) of NRDP 2007-2013 and the allocation of additional resources for the development of forestry infrastructure are extremely important.

In order to guarantee the sustainable increase of the biomass amount, both forest management techniques and technologies for the use of wood biomass shall be encouraged and promoted, including the improvement of trees quality, processing and use of wood biomass for energy production particularly resulting from deciduous forests and small size trees.

- f) Consolidation of efforts in order to motivate and organise forest owners as well as to increase their awareness regarding the use of biomass

Together with forest owners, it shall be investigated the method of introducing and encouraging the manner of using forestry management plans by the individual or associated forest owners particularly in areas with a high level of property fragmentation. To this effect, access to basic data on private forests could be facilitated complying at the same time with national requirements on data protection.

In countries with experience in use of biomass, operational forest owners' associations proved their capability of increasing the wood amount on small-sized private properties. Therefore, rural development policies shall continue to support the development of the forest owners' associations capacity so as to encourage innovation. Moreover, methods of encouraging and supporting the establishment of forest owners' organisation, cooperatives or other types of groups shall be looked for.

- g) Promotion of technological research and development in the field of wood production, harvesting technologies and use

Romanian research institutes shall make maximum use of the European Technological Platform for forestry resources and its research strategic agenda in order to obtain support by means of the Framework Programme 7 (FP7) of the European Union for innovative mobilisation projects regarding the increase of wood amount. Moreover, it shall be necessary that major importance research themes to be supported through national funds and/or European funds intended for research: the influence of using wood for energy production on raw material general supply, sustainable harvesting techniques and technologies, technologies for use of forestry biomass for the efficient production of energy, sustainable management of forests and sustainable use of forestry biomass.

Impact on other sectors

(a) How will the impact of energy use of biomass on other sectors based on agriculture and forestry be monitored? What are these impacts? (If possible, please provide information also on quantitative effects.) Is the monitoring of these impacts planned in the future?

Following the analyses performed by the National Institute of Wood, it has been reached the conclusion that, on the supposition that the afforestation of an average area of approx. 10 000 ha/year of degraded/improper for agricultural use (the optimistic scenario, the double comparing to the afforestation value reached in 2005-2006), the increase of the National Forestry Fund area would be of approx. 100 000 ha by the end of 2020, representing only 5% of the agricultural land estimated to be currently “available”. Therefore, considerable large areas of agricultural land shall remain available for agricultural crops for biofuel production or other potential use. The stipulated measures in relation to the National Forestry Fund shall not affect the introduction of a significant part thereof in the protected natural areas (the total area of the forestry fund within natural and national parks is of 660 0000 ha out of which approx. 160 000 ha are included in the fully protected areas out of which 50 000 ha are under the private property of natural and legal persons) and their management in accordance with the forestry system of measures and the approved protected areas management plans.

(b) What kind of development is expected in other sectors based on agriculture and forest that could have an impact on the energy use? (E.g. could improved efficiency/productivity increase or decrease the amount of by-products available for energy use?)

The increase, under sustainable conditions, of the forestry biomass for energy use through the application of the presented measures, shall lead to the development of the forestry sector as a whole, the social economic increase through the development of the “downstream” sectors (transport, processing, energy production etc.) both at local and regional/national level.

As regards the impact of biomass use for energy, it shall be considered, inter alia, the following aspects:

- the eligibility analysis of the sugar production for non-food bioethanol applicable to uncultivated lands (fallow land) and use for energy crops;
- assessment of energy plants regime implementation, including by the introduction of programmes for encouraging the use of degraded arable lands for energy crops in compliance with biomass sustainability criteria;
- check of the biofuels demand impact on the market prices;
- financing campaign for informing farmers and forestry holdings on the advantages of energy crops and the resulting possibilities;
- introduction of new technologies for superior use of biomass (i.e. second generation biofuels, biorefining etc.)
- examination of legislation on food by-products and the method of amending it in order to facilitate the authorisation and approval of biofuel production substitution methods; implementation of the mechanism proposed for the clarification of rules applicable to the secondary use of waste;
- the analysis of the impact on the biomass consumption in Romania, the extension of distribution networks and the individual consumption of natural gas or LPG.

The development methods estimated for other agriculture and forestry based sectors and which may have an impact on the energy use are:

- use of biomass based on specific investment projects that provide attractiveness since the obtained thermal energy implies lower costs in relation to fossil fuels and has positive effects on the environment;
- use of zootechnical manure for obtaining biogas;

- use of biomass made of food waste and waste resulting from fishery by-products particularly for obtaining biodiesel;
- increase of agricultural production per unit area which shall lead directly to the increase of the agricultural biomass quantity.

4.7. Planned use of statistical transfers between Member States and planned participation in joint projects with other Member States and third countries

4.7.1 Procedural aspects

- a) Describe the national procedures (step by step) established or to be established, for arranging a statistical transfer or joint project (including responsible bodies and contact points).*

Romania considers that it shall be able to duly achieve the global objective without requesting any transfer from other Member States while no national procedures have been established for the arrangement of a statistical transfer.

At present, structural funds as well as national programmes offer important possibilities of financial support for investments in the use of RES. It is estimated that the investments thus performed will be sufficient to follow the indicative trajectory regarding the production of energy from RES.

Economic development to be registered by our country in parallel with support mechanisms for the production of energy from RES shall allow the increase of private investment volume in energy production installations using RES. Therefore, no national procedures have yet been established for the development of joint projects.

The opportunity of joint projects on Romanian territory shall be subsequently examined depending on the evolution of the actual use of the national potential. Upon the drafting of procedures on the development of such projects, the specific experience available at the time at EU level shall be used to the greatest possible extent. Romania shall also use its own experience gained during the development of Joint Implementation Projects in accordance with the Kyoto Protocol.

- b) Describe the means by which private entities can propose and take part in joint projects either with Member States or third countries.*

No procedures for the development of joint projects have yet been drafted.

- c) Give the criteria for determining when statistical transfers or joint projects shall be used.*

At present, the use of statistical transfers is not being considered. Joint projects shall be used if deficits are registered in the financing of investments in the use of RES.

- d) What is going to be the mechanism to involve other interested Member States in a joint project?*

No procedures for the involvement of other interested Member States in a joint project have yet been drafted.

- e) Are you willing to participate in joint projects in other Member States? How much installed capacity/electricity or heat produced per year are you planning to support? How do you plan to provide support schemes for such projects?*

At present, the willingness to participate in joint projects in other Member States is not foreseen. There are perspectives of developing a joint project with Bulgaria for the establishment of certain hydro facilities on the Danube River within the frontier areas.

4.7.2. Estimated excess production of renewable energy compared to the indicative trajectory which could be transferred to other Member States

According to the specifications contained in the forecast document, Romania considers that it will be able to duly achieve the set global objective based exclusively on the domestic production without requesting any transfer from other Member States. The evolution of energy production from RES shall follow the established indicative trajectory without usable excesses at European level.

Table 4.14

Estimated excess and/or deficit production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States
(ktoe)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimated excess in forecast document	0	0	0	0	0	0	0	0	0	0	0
Estimated excess in NREAP	0	0	0	0	0	0	0	0	0	0	0
Estimated deficit in forecast document	0	0	0	0	0	0	0	0	0	0	0
Estimated deficit in NREAP	0	0	0	0	0	0	0	0	0	0	0

Note: Table 4.14 corresponds to Table 9 of the template for National Renewable Energy Action Plans approved by Commission Decision 2009/548/EC

4.7.3. Estimated potential for joint projects

- a) In which sectors can you offer renewable energy use development in your territory for the purpose of joint projects?*

At present, the possibility to establish a new hydroelectric power plant on the Danube River in cooperation with the partners of the Republic of Bulgaria as well as a hydroelectric power plant on Tisa River in cooperation with the partners of Ukraine is being analysed.

At present, structural funds as well as national programmes offer important possibilities of financial support for investments in the use of RES. It is considered that the investments to be thus performed will be sufficient to follow the indicative trajectory regarding the production of energy from RES.

Economic development to be registered by our country in parallel with support mechanisms for the production of energy from RES shall allow the increase of private investment volume in energy production installations using RES.

The opportunity of joint projects on Romanian territory shall be subsequently re-examined depending on the evolution of the actual use of the national potential.

- b) Has the technology to be developed been specified? How much installed capacity/electricity or heat produced per year?*

The two projects subject to the analysis refer to the production of E-RES in partnership with Bulgaria and Ukraine. The installed capacity and the amount of electricity annually produced are to be established based on feasibility studies, following the completion of negotiations at intergovernmental level.

For the hydroelectric power plant on Tisa River (which could be installed in partnership with Ukraine) the Romanian representative estimated an installed capacity of 30 MW.

- c) How will sites for joint projects be identified? (For example, can local and regional authorities or promoters recommend sites? Or can any project participate regardless its location?)*

For the projects aiming at the use of hydro energy, sites essentially depend on local conditions. Romanian specialised institutes have drafted an inventory of the national hydro potential and the favourable sites (including sites for micro hydroelectric power plants). The studies in question have been financed through the Industry Sectoral Research – Development Plan while the associated results are published on the MECBE website (www.minind.ro).

The said studies also include information on the potential of other RES (biomass, solar, wind power, geothermal) in different regions of the country. Local or regional authorities or promoters may recommend favourable sites.

- d) Are you aware of the potential for joint projects in other Member States or in third countries? (In which sector? How much capacity? What is the planned support? For which technologies?)*

The potential for joint projects is known as far as the related information has been made public.

e) Do you have any preference to support certain technologies? If so, which?

In accordance with the specifications above, the opportunity of joint projects on Romanian territory shall be analysed depending on the evolution of actual use of the national potential. Having regard to the fact that the biomass is the renewable energy source with the highest potential, it is estimated that its use will be preferred.

4.7.4. Estimated demand for renewable energy to be satisfied by means other than domestic production

In accordance with the specifications contained in the forecast document and restated in Paragraph 4.7.2, Romania considers that it will be able to duly achieve the set global objective based exclusively on the domestic production without requesting any transfer from other Member States.

5. ASSESSMENTS

5.1. Total contribution expected of each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, heating and cooling and transport

- a) Estimation of total contribution expected from each technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity

- **Wind power energy**

§ The use of wind power energy for the production of electricity has been recently initiated in Romania. The evolution of the installed power in wind power electric plants and the electricity produced by such plants is presented in Table 5.1.

Table 5.1

	M.U.	2004	2005	2006	2007	2008
Installed power at the end of the year of which:	MW	0.935	1.320	0.910	3.130	5.222
onshore		0.935	1.320	0.910	3.130	5.222
offshore		0	0	0	0	0
Actually produced electricity	GWh	0.142	0.227	0.396	2.524	4.978
onshore		0.142	0.227	0.396	2.524	4.978
offshore		0	0	0	0	0
Electricity produced and recalculated using the normalizing formula of Annex II to Directive 2009/28/EC of which	GWh		0.2608	0.3148	1.4046	4.0209
onshore			0.2608	0.3148	1.4046	4.0209
offshore			0	0	0	0

Source: NIS – Energy balance and energy tool structure – collection

§ The introduction in Romania of E-RES support mechanisms and the technological progresses registered at international level led to a high interest of investors, initial assessment being thus exceeded by far.

In 2010, the completion of several major projects is planned, among which the projects of Fântânele (CEZ), Babadag (Martifer), Peștera and Cernavodă (EDPR/Renovatio), Tulcea (Global Wind Power).

At present, TSO and DO issued, by 30 April 2010, technical approvals for the connection of wind power plants to the system for an installed power of 4236 MW and have already concluded connection contracts for an installed power of 2622 MW (Table 1.10). On the other hand, TSO and DO draw the attention on the fact that if investors obtain the technical approval for connection, they do not have guarantees on the actual performance of the investment since the regulation regarding connection does not provide for the strong commitment of investors in relation to projects for the installation of new units.

The ETG perspective plan drafted by TRANSELECTRICA provides for an installed power of 1027 MW in 2012 and 3000 MW in 2017 within wind power plants.

On the other hand, major problems have already occurred in relation to:

- classification of wind power units within NES (being necessary to increase the fast tertiary reserve power within the system);
- discharge of the generated power (applications are concentrated in the Dobrogea area, which has a relatively low consumption and within which the Cernavodă Nuclear-Electric Power Plant and other heat power plants projects are to be developed).

Considering the approvals issued so far and the amount of available reserves, CNTEE Transelectrica S.A. must approve the connection of wind power plants to the ETG, provided that the previously mentioned issues are remedied. Details are shown in point 4.2.6.

§ In accordance with the data issued by European Wind Energy Association, with a probability of over 90%, wind power units with an installed power of 553.5 MW, respectively 780.5 MW shall be installed in Romania in 2010 and 2011. With a high probability, wind power units with an installed power of 956 and 1067 MW shall be installed in 2012 and 2013. The actual evolution will depend on the general economic situation in Romania and the enforcement of Law 220/2008 with the amendments approved by the Chamber of Deputies in June 2010 regarding the promotion system.

§ Upon the drafting of the forecast on the contribution of wind power plants to the production of E-RES, the following aspects were considered:

- information on projects under development;
- information obtained from TSO and DO on connection notices and contracts concluded with wind power energy producers as well as current technical possibilities to conclude new contracts on the connection to the network;
- information obtained from investors;
- legislative framework in force.

§ Investors show maximum interest in commissioning wind power plants by the end of 2014 since Law 220/2008 stipulates that the promotion system shall be applicable starting with the date on which producers start generating electricity if commissioning operations are performed by the end of 2014; thus, a large number of commissioned installations shall be registered by the end of the said year. This deadline has been extended until 2016 by amendments to Law 220/2008 approved in 2010 since the intentions of investors forecasted by 2014 were not sufficient to guarantee that the annual quotas would be reached; without the promotion system provided for by Law 220/2008, the decision to invest in and complete the projects announced by certain investors may be reconsidered.

§ It has been considered that by 2020 no offshore installations will be established since the attention (and funds) shall be concentrated on the establishment of onshore installations; the problem related to the discharge of the power generated in Dobrogea region emphasizes the difficulties encountered in the establishment of offshore installations. The forecast on the installed power and the energy produced in wind power electric plants within the 2010-2020 interval is presented in Table 5.2.

Table 5.2 Evolution of installed powers at the end of each calendar year and the energies generated each year in wind power plants

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Wind power energy (actual values)	1.32	0.227	560	460	1250	1997	1850	3316	2450	4634	2880	5952
<i>onshore installations</i>	1.32	0.227	560	460	1250	1997	1850	3316	2450	4634	2880	5952
<i>offshore installations</i>	0	0	0	0	0	0	0	0	0	0	0	0
Wind power energy (normalised values in accordance with Directive 2009/28/EC)	1.32	0.2608	560	456	1250	1858	1850	3259	2450	4574	2880	5828

	2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GW	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Wind power energy	3200	6614	3400	7271	3600	7668	3750	8020	3900	8230	4000	8400
<i>onshore installations</i>	3200	6614	3400	7271	3600	7668	3750	8020	3900	8230	4000	8400
<i>offshore installations</i>	0	0	0	0	0	0	0	0	0	0	0	0
Wind power energy (normalised values in accordance with Directive 2009/28/EC)	3200	6631	3400	7239	3600	7698	3750	8041	3900	8342	4000	8539

- **Hydroelectric energy**

§ The evolution of installed power in hydroelectric power plants and the electricity produced by such plants is presented in Table 5.3.

Table 5.3

	M.U.	2004	2005	2006	2007	2008
Installed power at the end of the year of which:	MW	6,279	6,289	6,282	6,331	6,362
in plants < 1MW		64	63	56	62	61
in plants between 1 MW and 10 MW		255	262	269	288	292
in plants > 10 MW		5,960	5,964	5,957	5,981	6,009
Actually produced electricity of which:	GWh	16,513	20,207	18,356	15,966	17,195
in plants < 1MW		90	77	71	90	99
in plants between 1 MW and 10 MW		572	675	622	514	549
in plants > 10 MW		15,851	19,455	17,663	15,362	16,547
Electricity produced and recalculated using the normalizing formula of Annex II to Directive 2009/28/EC of which:	GWh	15,977	16,091	16,248	16,571	16,876
in plants < 1MW		87	61	63	93	97
in plants between 1 MW and 10 MW		553	538	551	533	539
in plants > 10 MW		15,336	15,493	15,634	15,944	16,240

Source: NIS – Energy balance and energy tool structure – collection, for data on the installed power and the actually produced electricity

Note: Available statistical data allowed the normalisation of total values on the total quantity of electricity produced in hydroelectric power plants using the formula contained in Annex II of Directive 2009/28/EC. The values “normalised” per capacity classes have been determined considering that the total normalised value has the same share structure as the actually produced total value.

§ **The Energy Strategy of Romania for the 2007-2020 period** stipulates that main investments to be performed within the 2008-2020 period in the hydroelectric sector are in:

- upgrading of hydro plants with an installed power of approx. 2328 MW;
- in process projects for hydro plants with an installed power of 759 MW;
- new projects for hydro plants with an installed power of 209 MW;
- establishment of HEF with an installed power of 30 MW on Tisa River;
- establishment of CHEAP (pumped storage hydroelectric plant) Tarnita, with an installed power of 1000 MW.

In the same document, the domestic production of hydroelectric energy is estimated at 16 TWh in 2010 and 18 TWh in 2015.

§ The forecast prepared for the hydro energy production is presented in Table 5.4.

Table 5.4

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GW	MW	GW	MW	GWh	MW	GWh	MW	GW
Hydro energy (exclusively CHAP)	6289	16091	6413	16567	6537	16857	6687	17215	6857	17624	7087	18191
< 1MW	63	61	63	95	65	98	70	105	76	114	82	123
1MW-10 MW	262	538	324	624	372	717	417	804	461	888	505	973
> 10MW	5964	15493	6026	15848	6100	16043	6200	16306	6320	16622	6500	17095
of which pumping												
Hydro energy (values normalised in acc. with Directive 2009/28/EC)	6289	16091	6413	17142	6537	17460	6687	17870	6857	18080	7087	18479

	2015		2016		2017		2018		2019		2020	
	MW	GW	MW	GW	MW	GW	MW	GW	MW	GWh	MW	GWh
Hydro energy (exclusively CHAP)	7287	18679	7387	18904	7452	19063	7513	19214	7621	19491	7729	19768
< 1MW	90	135	95	143	100	150	103	155	106	159	109	164
1MW-10 MW	547	1054	592	1141	602	1160	610	1175	615	1185	620	1195
> 10MW	6650	17490	6700	17621	6750	17753	6800	17884	6900	18147	7000	18410
of which pumping												
Hydro energy (values normalised in acc. with Directive 2009/28/EC)	7287	19072	7387	19394	7452	19558	7513	19937	7621	20186	7729	20135

- **Solar energy** (photovoltaic + concentrated solar energy)

A number of experimental pilot installations have been developed during recent years within the Valahia University of Targovi•te, the Polytechnic University of Bucharest, the Energy Research and Modernisation Institute ICEMENERG of Bucharest etc. Nevertheless, the said organisations were not licensed as producers of E-RES. (the PV Gis average 1220KkWh/kW (average radiation 1525kWh/m²/year). Estimations for 2020 are of 500MW connected to medium/high voltage networks in areas with no usable wind power potential (Muntenia, Oltenia, Transylvania) and 500MW in distributed applications.

Investors' interest in use of solar energy in order to produce electricity was stimulated by Law 220/2008 providing for the granting of 4 GC for 1 MWh of electricity of solar origin. The fact that on the country's territory (particularly in the South area) there are available lands for the establishment of solar-electric plants (but for which the wind power potential is reduced) enhanced this interest. The first producer of solar origin E-RES, qualified for the production of non-dispatchable priority production was the Mayor's Office of Flore•ti Commune in 2009, the installed power being of 8.8 kW. There are several large scale projects that have already been initiated. A forecast of the installed power and the energy produced in photovoltaic plants is presented in Table 5.5.

Table 5.5

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Solar energy	0	0	0	0	8	10	43	50	78	100	113	140
	2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Solar energy	148	180	183	220	200	246	220	271	240	295	260	320

- **Biomass** (solid + biogas + bioliquids = total, of which in CHP)

Table 5.6

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Solid biomass	0	0	10	48	80	385	145	700	200	960	250	1200
Biogas	0	0	4	19	10	50	20	95	50	240	90	440
Bioliquids	0	0	0	0	0	0	0	0	0	0	0	0
Total, of which:	0	0	14	67	90	435	165	795	250	1200	340	1640
in CHP	0	0	14	67	90	435	165	795	250	1200	340	1640

	2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Solid biomass	300	1450	350	1680	370	1780	385	1855	400	1930	405	1950
Biogas	125	600	160	770	170	820	180	865	190	920	195	950
Bioliquids	0	0	0	0	0	0	0	0	0	0	0	0
Total, of which:	425	2050	510	2450	540	2600	565	2720	590	2850	600	2900
in CHP	425	2050	510	2450	540	2600	565	2720	590	2850	600	2900

- **Geothermal energy**

In Romania, the hydro-geothermal sources temperature (used by means of drilling-extraction) ranges between 25°C and 125°C.

The geothermal energy potential with current use possibilities in Romania is of approximately 167 thousand toe.

Geothermal resources are already used for heating and preparation of domestic hot water in individual dwellings, social services (offices, educational institutions, commercial and social areas etc.), industrial sector or agro-zootechnical areas (greenhouses, solariums, animal farms etc.).

National energy strategies applied with the consistent contribution of specialists in this field estimate that the use of geothermal energy shall extent in the following years but only for heating purposes.

Investors have not yet showed interest in the establishment of electricity production installations using geothermal energy.

European Geothermal Energy Council (EGEC) has recently published the document "Vision 2050 of the geothermal electricity sector" as public debate document.

According to the said document, 2010-2020 shall represent the period during which the European geothermal industry shall be established. The EGS concept shall be developed in different regions and under different geological conditions throughout Europe by the construction of power plants so as to maintain the leading position regarding the development of this technology. The efficient binary cycle shall be developed for low temperature resources. According to EGEC, 2020-2030 represents the period during which the geothermal energy shall emerge as a competitive source of electricity.

In the document it is considered that geothermal resources with temperatures ranging between 80°C and 180°C are sources with low heat content and that this temperature level is appropriate to be used in binary plants (Rankine or Kalina cycle).

Taking into account the thermal potential of geothermal resources in Romania (under 120°C) it shall be considered that such sources may represent a primary energy source for the production of electricity after 2020 and that their role could be significant during this period.

- **Tide, wave and ocean energy**

Romania does not have energy potential due to tides, waves and oceans.

Table 5.7a Estimation of total contribution (installed capacity, gross electricity generation) expected from each renewable energy technology in Romania to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity 2010-2014

	2005		2010		2011		2012		2013		2014	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Hydro:	6289	16091	6413	16567	6537	16857	6687	17215	6857	17624	7087	18191
< 1MW	63	61	63	95	65	98	70	105	76	114	82	123
1MW-10 MW	262	538	324	624	372	717	417	804	461	888	505	973
> 10MW	5964	15493	6026	15848	6100	16043	6200	16306	6320	16622	6500	17095
of which pumping	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal:	0	0	0	0	0	0	0	0	0	0	0	0
Solar:	0	0	0	0	8	10	43	50	78	100	113	140
photovoltaic	0	0	0	0	8	10	43	50	78	100	113	140
concentrated solar power	0	0	0	0	0	0	0	0	0	0	0	0
Tide, wave ocean:	0	0	0	0	0	0	0	0	0	0	0	0
Wind power:	1,32	0,227	560	460	1250	1997	1850	3316	2450	4634	2880	5952
onshore	1,32	0,227	560	460	1250	1997	1850	3316	2450	4634	2880	5952
offshore	0	0	0	0	0	0	0	0	0	0	0	0
Biomass:	0	0	14	67	90	435	165	795	250	1200	340	1640
solid	0	0	10	48	80	385	145	700	200	960	250	1200
biogas	0	0	4	19	10	50	20	95	50	240	90	440
bioliquids	0	0	0	0	0	0	0	0	0	0	0	0
Total	6290.32	16091.23	6987	17094	7885	19299	8745	21376	9635	23558	10420	25923
of which in CHP	0	0	14	67,452	90	435,44	165	795	250	1200	340	1640

Note: Table 5.7a corresponds to Table 10a of Decision 2009/548/EC.

Table 5.7b Estimation of total contribution (installed capacity, gross electricity generation) expected from each renewable energy technology in Romania to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity 2015-2020

	2015		2016		2017		2018		2019		2020	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Hydro:	7287	18679	7387	18904	7452	19063	7513	19214	7621	19491	7729	19768
< 1MW	90	135	95	143	100	150	103	155	106	159	109	164
1MW-10 MW	547	1054	592	1141	602	1160	610	1175	615	1185	620	1195
> 10MW	6650	17490	6700	17621	6750	17753	6800	17884	6900	18147	7000	18410
of which pumping	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal:	0	0	0	0	0	0	0	0	0	0	0	0
Solar:	148	180	183	220	200	246	220	271	240	295	260	320
photovoltaic	148	180	183	220	200	246	220	271	240	295	260	320
concentrated solar power	0	0	0	0	0	0	0	0	0	0	0	0
Tide, wave ocean:	0	0	0	0	0	0	0	0	0	0	0	0
Wind power:	3200	6614	3400	7271	3600	7668	3750	8020	3900	8230	4000	8400
onshore	3200	6614	3400	7271	3600	7668	3750	8020	3900	8230	4000	8400
offshore	0	0	0	0	0	0	0	0	0	0	0	0
Biomass:	425	2050	510	2450	540	2600	565	2720	590	2850	600	2900
solid	300	1450	350	1680	370	1780	385	1855	400	1930	405	1950
biogas	125	600	160	770	170	820	180	865	190	920	195	950
bioliquids	0	0	0	0	0	0	0	0	0	0	0	0
Total	11060	27523	11480	28845	11792	29577	12048	30225	12351	30866	12589	31388
of which in CHP	425	2050	510	2450	540	2600	565	2720	590	2850	600	2900

Note: Table 5.7b corresponds to Table 10b of Decision 2009/548/EC.

5.2. Total contribution expected from energy efficiency and energy saving measures to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity, heating and cooling and transport.

In Chapter 2, the energy consumption forecast is presented in the perspective of 2020 in the reference scenario (without considering the energy efficiency measures applied after 2009) and in the increased energy efficiency scenario (considering such measures). Both energy scenarios have been drafted starting from the same macroeconomic development scenario drafted by CNP. According to the said scenario, the current economic crisis shall have major influences on a medium and long term. Thus, the GDP value in 2020 shall be of (only) 144 billion Euro 2005 comparing to over 185 billion Euro 2005 in forecasts drafted in 2007 (including the forecast prepared by the Technical University of Athens using the PRIMES model). The reduction of the economic growth pace influences the national economy development and modernisation process as well as the increase of the population life standard comparing to the evolutions considered for the forecasts drafted in 2007. The forecast on the gross final energy consumption in the reference scenario for 2020 leads to a value of 34374 ktoe comparing to 26261 ktoe forecasted for 2010. Energy efficiency measures shall be continued to be applied in all end consumption sectors. An important role shall be held by energy efficiency increase measures in the public sector which shall constitute an example at national level. It is thus estimated that these measures shall lead to a gross final energy consumption value of 30278 ktoe in 2020, namely to a reduction of final energy consumption with 4096 ktoe comparing to the inertial scenario.

5.4 Preparation of the National Renewable Energy Action Plan and the follow-up of its implementation

(a) How were regional and/or local authorities and/or cities involved in the preparation of this Action Plan? Were other stakeholders involved?

During the NREAP drafting stage, the eight RDA performing their activity on the country's territory were requested to provide information (according to the model established by Commission Decision 2009/548/EC) to be used for the preparation of the document. The received information was actually used.

For the drafting of NREAP, an inter-ministerial working group has been constituted, being coordinated by MECBE-DGEA. Specialists within MECBE-DGEOG and MECBE-DQIE as well as within MRDT, MAI, MARD, MTI, ANRE, ANRSC, CNP, NIS etc. made part of this working group. For the working group activities, representatives of non-governmental associations with objects/interests in the field of RES (New Sources of Energy Entrepreneurs Association – SunE, Romanian Wind Energy Association – RWEA, Centre for Promotion of Clean and Efficient Energy in Romania – ENERO, Romanian National Institute for Energy Development Studies - IRE etc.) were co-opted.

The document has been discussed during different drafting stages with specialists within large companies in the field and having responsibilities in the field of RES use (TRANSELECTRICA, HIDROELECTRICA, ELECTRICA).

The final document was drafted by a consortium coordinated by the Energy Research and Modernising Institute – ICEMENERG, within a project financed by MECBE through the Industry Sectoral Research – Development Plan.

(b) Are there plans to develop regional/local renewable energy strategies? If so, could you please explain? In case relevant competences are delegated to regional/local levels, what mechanism will ensure national target compliance?

Eight regional development regions are constituted on the Romanian territory. One RDA operates within each region with the objective the strategic programming of economic and social development of the region in partnership with local players. Use of RES represents an important component of regional strategies. RDA manages the development funds allocated to the region in question by EU. Nevertheless, there are no regional strategies/programmes intended exclusively to energies from RES. The said projects are included in programmes having a broader subject (sustainable development, infrastructure modernisation etc).

(c) Please explain the public consultation carried out for the preparation of this Action Plan.

The NREAP draft was published on the MECBE website so as all interested parties had the possibility to consult it and to submit comments. Comments from several ministries (MAI, MEF, MTI, MARD), national energy authorities (ANRE, ANRSC), companies within the energy sector (CEZ) and non-governmental organisations (Romanian-American Chamber of Commerce) have been received.

The document was presented within several workshops and technical scientific events organised in Romania, among which we shall mention the Energy Regional

Forum, an event organised by the Romanian National Committee for the World Energy Council in Neptun during the period 13-17 June 2010.

(d) Please indicate your national contact point/the national authority or body responsible for the follow-up of the Renewable Energy Action Plan?

The national authority responsible for the follow-up of the Renewable Energy Action Plan is MECBE-DGEOG.

(e) Do you have a monitoring system, including indicators for individual measures and instruments, to follow-up the implementation of the Renewable Energy Action Plan? If so, could you please give more details on it?

There is a well established follow-up system regarding E-RES. According to legislation in force, the associated responsibility shall be undertaken by ANRE. The system has been described in detail in Chapter 4.3. ANRE publishes on its own website www.anre.ro annual reports on the GC market and separate annual reports for the issuing of guarantees of origin.

There is also a follow-up system for the quantity of biofuels used for transport based on manufacturers' reports.

As regards the use of RES for heating/cooling processes, the necessary investments are usually performed through the financial support granted within Sectoral Operational Programmes (co-financing from Community funds) or within programmes financed from the State budget. Follow-ups are performed by national authorities implementing the programmes in question. A unique national follow-up system is not yet in place. Moreover, there is no follow-up system for investments performed exclusively from the economic operators, local authorities or population's own funds.

ABBREVIATIONS

1	RDA	Rural Development Agency
2	LEA	Local Energy Agency
3	ANRE	Romanian Energy Regulatory Authority
4	ARCE	National Agency for Energy Conservation
5	ASRO	Romanian Standardisation Association
6	TNC	Technical Notice of Connection
7	BNR	Romanian National Bank
8	NACE	Classification of national Economic Activities in the European Community
9	IEC	Increase of Economic Competitiveness
10	RDC	Rural Development Council
11	WPEP	Wind Power Electric Plants
12	ESC	European Standardisation Committee
13	CENELEC	European Committee for Electrotechnical Standardisation
14	DHEP	District Heating Electric Plant
15	NCPP	Nuclear-Electric Power Plant
16	RCO	Romanian Classification of Occupations
17	TPP	Thermal Power Plant
18	GC	Green Certificate
19	DGEA	Directorate General of European Affairs
20	DGEOG	Directorate General for Energy, Oil and Gas
21	DQIE	Directorate for Quality Infrastructure and Environment
22	MID	Major Intervention Domain
23	E-RES	Electricity Produced from Renewable Sources
24	ETSI	European Telecommunication Standardisation Institute
25	WPG	Wind Power Generators
26	NG	Natural Gas
27	CNGV	Compressed Natural Gas for Vehicles
28	LNG	Liquefied Natural Gas
29	LPG	Liquefied Petroleum Gas
30	GD	Government Decision
31	SME	Small and Medium Enterprises
32	NIS	National Institute of Statistics
33	ISCIR	State Inspection for the Control of Boilers, Pressure Vessels and Hoisting Equipment
34	IT	Information Technology
35	OL	Overhead Wiring
36	MAI	Ministry of Administration and Interior
37	MARD	Ministry of Agriculture and Rural Development
38	MRDT	Ministry of Rural Development and Tourism
39	MECBE	Ministry of Economy, Commerce and Business Environment
40	MEF	Ministry of Environment and Forests
41	MTI	Ministry of Transport and Infrastructure

42	DO	Distribution Operator
43	GO	Government Ordinance
44	IEB	Intermediary Energy Body
45	OPCOM	Commercial Operator of the Electricity Market
46	TSO	Transmission and System Operator (=TRANSELECTRICA)
47	GEO	Government Emergency Ordinance
48	GDP	Gross Domestic Product
49	NREAP	National Renewable Energy Action Plan
50	SOP	Sectoral Operational Programme
51	MND	Market for the Next Day
52	EDG	Electricity Distribution Grid
53	ETG	Electricity Transmission Grid
54	CTESS	Centralised Thermal Energy Supply System
55	NES	National Energy System
56	RES	Renewable Energy Sources
57	TRANSELECTRICA	The Romanian Power Grid Company TRANSELECTRICA SA (=TSO)
58	VAT	Value Added Tax
59	UCTE	Union for the Coordination of Transmission of Electricity
60	EU	European Union
61	UNFCCC	United Nations Framework Convention for Climate Change