



**EXPERT EVALUATION NETWORK
DELIVERING POLICY ANALYSIS ON THE
PERFORMANCE OF COHESION POLICY 2007–2013
YEAR 1 – 2011**

**TASK 1: POLICY PAPER ON RENEWABLE ENERGY AND
ENERGY EFFICIENCY OF RESIDENTIAL HOUSING**

ROMANIA

VERSION: FINAL

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GEA STRATEGY & CONSULTING

A report to the European Commission
Directorate–General Regional Policy

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LIST OF ABBREVIATIONS

- ANRE – Romanian Energy Regulatory Authority
- ARCE – Romanian Agency for Energy Conservation
- E-RES – Electricity Produced from Renewable Sources
- EE – Energy efficiency
- EF – Environment Fund
- EEN – Expert Evaluation Network
- EPBD – Energy Performance of Buildings Directive
- EPC – Energy Performance Certificate
- ERDF – European Regional Development Fund
- FREE – Romanian Fund for Energy Efficiency
- GC – Green Certificate
- GD – Government Decision
- GO – Government Ordinance
- KAI – Key Area of Intervention
- NEEAP – National Energy Efficiency Action Plan
- NREAP – National Renewable Energy Action Plan
- OP – Operational Programme
- PA – Priority Axis
- PIDU – Urban Development Plan
- ROP – Regional Operational Programme
- RES – Renewable Energy Sources
- SME – Small and Medium Enterprises
- SOP-ENV – Sectoral Operational Programme Environment
- SOP-IEC – Sectoral Operational Programme Increase of Economic Competiveness

1. EXECUTIVE SUMMARY

Romania places investment in renewable energy sources (RES) high on its development agenda and provides an array of direct and indirect support measures in order to achieve an ambitious target for their growth. Current policy provides a system of green certificates (GCs), along with direct support for investment through both national and ERDF financing. The policy mix also provides a favourable regulatory framework, together with tax exemptions and loan guarantees. Dedicated ERDF support is provided through the Operational Programme for increasing economic competitiveness (SOP-IEC).

Increases in energy efficiency in residential housing also rank high as both economic and social objectives and have been promoted actively in the last years through strong regulatory pressure combined with direct support. ERDF support is provided through the Regional Operational Programme (ROP) and the Operational Programme for the environment (SOP-ENV).

ERDF support in developing renewable energy is of a critical importance, as it represents around two thirds (on average) of the overall annual investment by the Government. At the same time, there is a clear overlap between the support from the ERDF and from national sources, since overall, there is no differentiation of support between the different types of renewable energy.

The role of Cohesion Policy in supporting improvements in energy efficiency in residential housing is marginal (with some ERDF-ROP resources invested in social housing) and indirect (Cohesion Fund support for improving centralised heating systems). National resources used for the thermal rehabilitation of buildings are far larger, while the pressure created by regulation can potentially give rise to a sizeable amount of private investment if the real-estate market provides sufficient incentives to do so.

The rationale for public support is related to Romania's need for economic and social development. There is however a lack of clear vision both in terms of prioritising different types of RES and in deciding the scope and size of the support for improving the energy efficiency of residential buildings.

Although under the current GC system there is some variation in the rate of support between types of renewable, seemingly related to the profitability of investment in each of them, ERDF support does not vary between types. The same applies to interventions in the energy efficiency of housing, for which the rate of support is the same regardless of the actual or potential return to investment.

2. NATIONAL POLICY

In 2007 the Romanian government approved a medium-term National Energy Strategy (Government Decision – GD 1069/2007), focused on three main strategic areas – energy security, sustainable development and competitiveness for the period up until 2020. The strategy outlined the support for both renewable energy and energy efficiency and several policy measures were developed as part of it, as indicated below.

Renewable energy

In 2007 Romania introduced a quota system with tradable green certificates (GC) issued for electricity generation from RES (the quota being increased from 0.7% of electricity produced in 2005 to 8.3% in 2010) and with compulsory dispatching and priority trade of RES generated power. One year later, ambitious renewable energy legislation (Law no. 220/2008) was adopted, introducing a system of loan guarantees (Romanian Fund for Energy Efficiency – FREE) and tax exemptions (no excise duty), assigning a number of GCs for each type of renewable and setting market price limits for GCs (between EUR 27 and EUR 55).

Table A – Number of assigned Green Certificates per type of RES

Type of RES	Photovoltaic	Biomass	Wind	Hydro (up to 10 MW)
No. of assigned GC per 1 MWh	4	3	2	1

In addition to the GC trading system, there are three direct measures of support for investment in RES:

- support under Cohesion Policy (ERDF related – see next section), which includes a state aid scheme for private enterprises and a co-financing scheme for local authorities.
- support under the “*National programme for the increase of energy efficiency and use of renewable energy sources in the public sector for 2009–2010*”, launched in 2008 and managed by ANRE (the national regulatory authority)¹.
- support from the Environment Fund (EF) through three different programmes:
 - a) the first on the production of energy from renewable energy sources: wind power, geothermal and solar energy, biomass and hydro-energy

¹The 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.

- b) the second for the replacement of traditional heating systems with those using solar energy, geothermal energy and wind power
- c) the third for increasing the amount of energy produced n from renewable sources.

EF funding is a publicly-targeted grant scheme with budgets allocated yearly on the basis of calls for proposals.

The GC system and direct support for investment are the main measures for stimulating the development of RES, with only GCs varying by type of RES.

Regulation stipulates that RES should be given priority over traditional energy sources (e.g. in access to the power grid), but in practice regulation has been less important than the direct support measured listed above. In an attempt to clarify the existing regulations and better define policy objectives, the National Renewable Energy Action Plan (NREAP) was adopted in 2010 as a roadmap for the development of RES. In a related initiative, the Government proposed several modifications to the allocation of GCs per type of RES which are to be subject to Parliamentary debate later in 2011 (see Annex III). The amendments envisage reduced support for wind energy and increased allocation of GCs for solar energy and new or refurbished hydro power plants.

Experts have indicated² that although the Government presents renewable energy as one of its priority areas, no initiatives were taken to increase public investment in this area as a way of countering the effects of the economic recession.

There is no formal regional differentiation in terms of the type or intensity of support provided, though in the case of solar and wind energy, there is a natural variation of RES potential across regions, so that those regions with most potential are likely to benefit consistently more than other regions from public funding (including from the ERDF).

Energy efficiency in residential housing

Romania has a comprehensive strategy for improving energy efficiency which is intended to tackle all components of the energy chain: production, transport, distribution and final use. In 2007, the Government approved the first National Energy Efficiency Action Plan (NEEAP) which set out the measures to be implemented in order to achieve energy savings of 1.5% a year over the average for the period 2001–2005 (see Annex II).

As regards residential housing, support for energy efficiency is provided through a combination of national, local and EU resources, backed by a proactive regulatory framework (transposed EPBD).

In terms of measures involving direct financial support, the following are the most relevant:

² Interview with Otilia Nutu, Energy Expert, Romanian Academic Society.

- a) financing under Cohesion Policy for the thermal rehabilitation of buildings (as part of integrated urban regeneration projects) and for restructuring and refurbishing urban heating systems (ERDF and Cohesion Fund related – see next chapter).
- b) financing under the “National programme on the increase of energy efficiency and use of renewable energy sources in the public sector for 2009– 2010”, managed by ANRE (see renewable energy subsection above).
- c) financing under the national programme for “*District heating 2006–2015 – heat and comfort*”, coordinated by the Ministry of Administration and Interior, aimed at reducing primary energy consumption by at least 100,000 toe a year relative to the 2004 level.
- d) financing under the programme for *thermal rehabilitation of buildings*, managed by the Ministry of Regional Development and Tourism, aimed at cutting energy consumption of large residential complexes, which is the most important intervention in the area.

In addition to direct support, recent regulations (e.g. the transposition of the EPB Directive into national legislation) could have a large effect in mobilising private investment.

There is no regional differentiation in terms of the type and intensity of support provided by national policy, apart from the usual compliance with state aid regulations, which means 10% lower intensity in the capital city region (Bucharest–Ilfov).

The substantial support for the thermal rehabilitation of buildings was presented by the Government as a way of reducing the energy bills of households affected by the crisis. The social implications were clear, especially during winter, when fuel bills were hard to manage for many poor families. In 2010, because of the difficulty of associations of owners to co-finance their 20% share of the costs of rehabilitation, the Ministry of Regional Development and Tourism has pushed for the adoption of Government Ordinance (GO) 69/2010 to provide government guarantees for bank loans.

However, the budget allocated by the Government for thermal rehabilitation of buildings was reduced from RON 32.9 million (around EUR 7.8 million) to RON 22.3 million in 2009 and from RON 40 million to RON 11.7 million (around EUR 2.8 million) in 2010 as a result of the budget constraints stemming from the crisis.

3. ERDF AND COHESION FUND SUPPORT AND CONTRIBUTION TO NATIONAL POLICY

Cohesion Policy provides support in the present programming period to renewable energy and energy efficiency through three Operational Programmes under the Convergence Objective, one addressed to private enterprises (SOP–IEC) and two to local authorities (ROP and SOP–ENV).

Private sector support – renewable energy

ERDF support to the private sector for RES covers one Priority Axis (PA 4) of the SOP–IEC entitled *Increasing energy efficiency and security of supply, in the context of combating climate change*. This is confined to industrial users and there is no direct ERDF support for private households.

KAI 4.2 *Valorisation of renewable energy resources for producing green energy* is entirely dedicated to supporting development in this area by providing grants to private investors. The ERDF contribution is around EUR 223.5 million and the total estimated public funding allocated to the scheme is around EUR 260 million (88% ERDF, 12% state co–financing). Overall, ERDF support for RES accounts for around 8.5% of the total SOP–IEC amount.

The scheme finances the investment of enterprises in the construction and modernisation of electricity and thermal power plants using biomass, small hydro–power (less than 10MW), solar energy, wind power, geothermal energy and biofuels. Only projects involving the initial investment are covered.

The maximum value of non–refundable support which can be granted for a project varies from 40% to 70% depending on the region and size of enterprise (Table B):

Table B – Maximum value of the non–refundable support granted for a project

Size of enterprise	Development region	micro & small	medium	Large
% of non–reimbursable funding	Bucharest – Ilfov	60%	50%	40%
	All other regions	70%	60%	50%

There are no regional quotas. For the first call launched in 2008, 12 projects were selected and contracted. The second call launched in the first quarter of 2010 elicited many more proposals (around 5 times as many) as the budget allocated. Contracts, however, will not be awarded until Autumn 2011 after a long process of evaluation.

Public sector support – energy efficiency

ERDF and Cohesion Fund support is allocated to improving energy efficiency in residential housing in both direct and indirect ways.

The ERDF–funded ROP is aimed, under PA 1, at providing *Support to sustainable development of urban growth poles* through the implementation of integrated urban development plans. This includes the rehabilitation of social housing and accounts for around 31% of the total budget allocated to the ROP. Beneficiaries are local authorities that own and manage social housing for vulnerable groups. The housing concerned, however, needs to be located within the “urban area of intervention”, defined by the local integrated urban development plan (PIDU).

In addition, Cohesion Fund–financed measures under SOP–ENV Priority Axis 3 “*Reduction of pollution and mitigation of climate change by restructuring and renovating urban heating systems towards energy efficiency targets in the identified local environmental hotspots*” cover the efficient use of non–renewable energy sources and, where possible, the use of renewable or less polluting sources of energy for old urban heating plants that need to be refurbished. PA 3 accounts for 8.2% of the total allocation to SOP–ENV.

Energy efficiency measures are concentrated on the rehabilitation of heating distribution systems, in line with Government policy³. The beneficiaries will be around 8 large municipalities and their urban–heating operating companies. In addition to SOP–ENV interventions, other financing for urban heating systems will come from external loans or from public–private partnership arrangements. At the end of 2010, two rehabilitation projects had been contracted (Timisoara & Iasi), while a third one was pending (Bacau).

ERDF challenges and perspectives

ERDF support, like national policy is not differentiated by type of RES. This implies potential overlap between Cohesion Policy support and national support. Although the authorities are careful to avoid double funding, a clearer separation of support per type of RES would help. As regards energy efficiency, there is no concern about overlapping, since EU support is targeted only to a limited extent on residential housing and more to industrial users and centralised heating systems, which is complementary to the national focus on residential housing.

For RES, the ERDF is the largest source of financing for direct grants, far exceeding support from national programmes. For energy efficiency of residential housing, the ERDF contributes only a modest amount to public investment, being limited to social housing and multi–family dwellings. However, the indirect effect of Cohesion Fund intervention in helping to restructure centralised urban heating systems is significant.

There is no regional differentiation in the scale or nature of support for either RES or energy efficiency of buildings, apart from the limit imposed in Bucharest on the maximum intensity of state aid.

There have been no changes in the allocation of the ERDF and Cohesion Fund to RES or energy efficiency. Two interim evaluations of the ERDF (for SOP–IEC and ROP) have highlighted the late start in launching calls for proposals and delays in project selection. Spending on all OPs has consequently been delayed. In the case of RES, evaluation of the

³The policy for the restructuring of systems for thermal energy production and distribution was set out in the programme “*Urban heating 2006 – 2009, quality and efficiency*”. The aim was that centralised systems for thermal energy production and distribution have a thermal efficiency of at least 80% by eliminating losses from networks for hot water and heating supply and by introducing metering.

first call and the launch of the second call were also delayed because of regulatory issues (relating, for example, to the definition of the state-aid scheme).

Although the Government declared in 2009 that absorbing the Structural Funds is a key priority in the medium-term and crucial to countering the negative effects of the crisis, there was no prioritisation of spending on RES or energy efficiency. Recently, however, the Government has decided to open negotiations with DG Regio on making the national programme for the thermal rehabilitation of buildings eligible for ERDF support because of the large reduction in the national resources allocated to the programme due to the crisis, so jeopardizing the achievement of the programme's goals. According to the managing authority for the ROP, such a change is possible even without amending the Operational Programme, by limiting eligibility to buildings located in National Growth Poles⁴. A state aid scheme for apartment owners complying with *de minimis* rules will be established as part of the process. The Government aims to have the extension of ROP eligibility approved by September 2011.

4. RATIONALE FOR PUBLIC INTERVENTION

The interventions focusing on both RES and energy efficiency are generally supported by adequate justifications for spending ERDF and Cohesion Fund resources in these areas.

Private sector support for RES in SOP-IEC underlies the important potential for their development in Romania, which might offer a long-term competitive advantage while contributing to sustainable economic development. The programming document sets out the existing EU conditionality in the area, as well as the national plan to exceed the required threshold. Supporting private investors is therefore one way of accelerating the development of RES.

Supporting public authorities in improving energy efficiency of social housing is aimed at reducing energy bills for the poorest families, while contributing to the overall objective of reducing the energy intensity of growth and improving living conditions, so having both an economic and a social rationale (as stated in the ROP). Similarly, the SOP-ENV acknowledges that 52% of the urban population is connected to centralised urban heating systems (owned by municipalities) and this will increase in the medium and longer term.

There is no reference to the profitability of beneficiaries of support in any of the programming documents supporting RES or energy efficiency. Social and environmental externalities are acknowledged in qualitative terms, but there is no quantification of these.

⁴ According to GD 998/2008 Romania has defined 7 of its largest municipalities as National Growth Poles. Within ROP, each Growth Pole has a reserved allocation of around EUR 100 million.

No distinction is made between different types of RES in terms of ERDF support. All types of investment are eligible, without regards to their profitability or on any other criteria.

Similarly, no differentiation is made between beneficiaries and their potential gains as regards support for improving the energy efficiency of housing.

While public debate is still limited, there are more and more discussions on how much and for how long the State should provide non-reimbursable grants for the thermal rehabilitation of buildings. There are beliefs that heavy public subsidy for RES will lead to an unsustainable bubble, similar to the recent real estate one. Some argue from a social perspective, claiming that the poor (e.g. elderly people) need to be supported directly by the state in order to have their energy bills reduced. Others point to the economic returns from investing in energy efficiency, claiming that public support discriminates against investors in buildings which have already been rehabilitated, which do not benefit from any subsidy or support. There are several voices suggesting more transparency and prioritisation in allocating public resources to energy. Overall, the debate is ad-hoc and incoherent, not touching decision makers in a consistent way.

5. RATE OF SUPPORT AND PROFITABILITY

In the case of renewable energy, the system of obligatory quotas combined with GC trading implies a variation in the rate of support depending on the choice of RES technology.

Although there is no explicit mention in policy documents, the number of GCs awarded is implicitly thought to be inversely proportional to the profitability of investment.

As regards energy efficiency in residential housing, there is no variation in the rate of support with the return on investment.

There is no regional variation in support except in the case of the ERDF co-financed regional state aid scheme for the use of renewable energy sources, implemented through SOP-IEC PA 4.2, which contains the usual differentiation in aid intensity differentiation depending on the degree of development of regions (which means that the Bucharest-Ilfov region gets a proportionately smaller amount of aid).

Similarly, there is no regional variation of support in the energy efficiency of residential housing.

The regulatory framework for RES does not take into account the cost of fossil fuels when setting the rate of public support over time. Moreover, there is no link between the recent regulatory arrangements and the increase in the cost of fossil fuels. In the substantiation note of the GO revising Law 220/2008, the only justification for amending the legislation is the need to comply with the EU *acquis* (Directive 2009/28/CE).

6. COSTS, PUBLIC SUPPORT AND PRICES

Renewable energy

Romania has a generous GC system in order to stimulate investment in RES. According to a recent World Bank review (World Bank 2010), the GC allocation per each type of RES places Romanian public support at over 50% above the average EU support price of about EUR 90 per MWh.

Current data do not allow a robust estimate of the cost of producing electricity for each source of renewable energy. Policy makers mostly use international benchmarks when planning ahead. The cost structure for RES investment varies significantly across regions, depending on the type of terrain, cost of the local labour force, existing infrastructure and proximity to the electricity grid. There is no systematic investigation of specific regional or local determinants of cost.

Energy efficiency

From January, 2011 any construction of buildings or the renting or sale of property in Romania needs an energy performance certificate (EPC). According to legislation⁵, the certificate (which is valid for ten years) informs any future buyer or tenant about the energy performance of the building in terms of its annual energy consumption (for heating, hot water supply and electricity) in kWh per square metre⁶. Although it was possible to issue EPCs even before 2011, according to real estate agencies and analysts⁷ they were not viewed as a significant price factor. Buyers assessed property more in terms of old (before'1989) and new (after'1989), rather than according to energy performance.

After EPCs became mandatory, market estimates provided by auditors suggested that the classification in a more efficient energy class might add up to EUR 5,000 more to the price. This, however, was not confirmed by real estate agencies, which suggest that the market is so depressed after the economic recession, that energy performance barely plays a role in the few transactions taking place. The agencies also add that it is too early to estimate a clear influence on prices, as the level of awareness of the issue is still low. Last but not least, the mass media⁸ have been critical of the objectiveness of energy audits, suggesting the sellers can bribe auditors to rank buildings in a higher class than they ought to be.

The lack of effect of energy on the prices of housing also applies to rents. The Romanian rent market is not regulated and speculative behaviour is still significant. Although it may be

⁵ Transposing the 2002/91/EC Directive (EPBD) and the 2010/31/EC Directive (EPBD recast) in Romania.

⁶ The energy consumption ranges from class A for a highly energy-efficient apartment to class G for low energy performance.

⁷ Interview with Radu Zilisteanu, real estate analyst.

⁸ Dan Popa, Hotnews portal (www.hotnews.ro), „How to get the energy certificate...”, January 3, 2011.

used to justify higher rents in negotiations, energy efficiency has only a marginal effect on rents as compared with the location of the property or with the simple classification into old and new described above.

7. CONCLUSIONS

ERDF support for renewable energy and the energy efficiency of residential housing is well justified and plays an important role in helping to reduce energy consumption.

Investment in RES is more important than for the energy efficiency of residential housing, both in terms of amount and the share of total investment.

Although the preconditions for successful implementation of projects have been met in terms of strategic commitment, the effect of the ERDF and Cohesion Fund in these areas will depend on overcoming a series of challenges which can become serious obstacles to the successful implementation of projects.

The first challenge relates to certain regulatory obstacles arising from delays in adopting the secondary legislation required to fully clarify the rules of the game. Although it was supposed to be functional from 2009, Law no. 220/228 is expected to become fully applicable only in 2011, after the amended version enters into force.

A further obstacle is the highly bureaucratic nature of administrative procedures. In many cases, there is no coordination between administrative bodies at national, regional and local level in charge of authorisation, licensing and certification. Moreover, they often fail to establish transparent schedules to allow proper planning of applications. A particularly problematic area is that of spatial planning, since many plots of land are not properly registered.

Finally, one of the key challenges that the development of renewables in Romania needs to overcome arises from the limitation of the national electricity grid, which it is estimated cannot sustain more than 4,000 MW of operational installed capacity from alternative sources. In order to expand renewables, suitable measures will, therefore, need to be taken to improve the transmission and distribution network, as well as the storage facilities, to design intelligent networks and to properly connect the national grid to international ones.

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INTERVIEWS

Name	Institution / position
Gabriel Friptu	Director, Management Authority, ROP
Otilia Nutu	Senior Energy Expert, Romanian Academic Society (SAR)
Radu Zilisteanu	Spokesperson, Romanian Association of Real Estate Agencies
Laurian Lungu	Owner, Macroanalitica
Carmen Boteanu	Expert, Management Authority, SOP-IEC
Sergiu Diaconu	Freelance environment expert

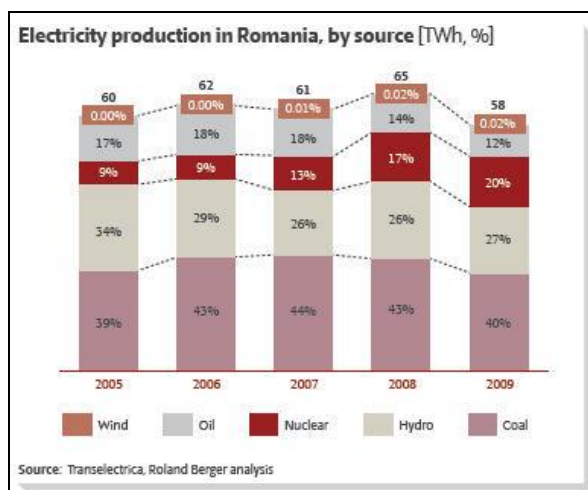
ANNEX

ANNEX I – Current situation in the field of renewable energy and energy efficiency

Renewable energy

The share of renewable sources in primary energy supply, as well as in electricity generation in Romania, is significantly above the EU average. Renewable sources in Romania are estimated in 2009 to have accounted for almost 18% of the national primary energy production (and respectively over 13% of the national gross inland energy consumption), as well as above 27% of the national power generation.

Despite the fact that these levels are considerably higher than the EU average (reaching 8.4% of gross inland energy consumption and 15.6% of electricity generation), they are mainly conveyed through conventional renewable sources – large hydro and household use of biomass – and less through "new" renewable sources. With regard to primary energy production, around two-thirds of the renewable energy generation comes from biomass and most of the remainder from hydroelectricity, while virtually the entire quantity of electricity generated from renewable sources can be attributed to hydro plants.



Given EU regulations, Romania is required to achieve a renewable level of 24% of the gross energy consumption by 2020 and 38% of the same year's electricity consumption.

Intermediary targets amount 11% of gross energy (RES target) and 33% of gross electricity consumption (RES-E target) by 2010.

In terms of both RES and RES-E, Romania is more or less on target. However, the majority of renewables are generated through large-scale hydro power and household biomass, leaving the high potential of “new” RES mainly untouched.

Energy efficiency

In order to improve energy efficiency, a comprehensive and streamlined set of measures were envisaged by the Romanian Government for each part of the chain: production, transportation, distribution, final use of energy:

1. Maintenance of the production capacity through: (a) building new capacities for producing electricity/heat, based on renewable energy sources in order to offset the future closure of obsolete production sites, with a view to guarantee the overall current production capacity; (b) equipping the refurbished/rehabilitated groups with de-sulphurization installations.
2. Improving the quality parameters of transportation and distribution grids, with the purpose to upgrade, rehabilitate and extend electricity, gas and oil transportation grids and electricity and gas distribution grids, which are suffering from important losses and have often exceeded their rated lifetime.
3. The improvement of energy efficiency at the end user aims both at the residential and industrial users.

ANNEX II – Energy efficiency measures in Residential Sector

Code	Title	Status	Type	Starting Year	Estimated Impact
RO6	Minimum efficiency standards for refrigerators	Ongoing	Legislative/Normative	2002	Low
RO7	Minimum efficiency standards for fluorescent lighting ballasts	Ongoing	Legislative/Normative	2004	Medium
RO9	Using promotion of efficient household appliances	Ongoing	Legislative/Informative	2001	Medium
RO13	Energy labeling of electric lamps	Ongoing	Legislative/Informative	2002	Medium
RO17	Energy labeling of air-conditioners	Ongoing	Legislative/Informative	2004	Medium
RO21	Minimum efficiency requirements of new hot-water boilers fired with liquid or gaseous fuels	Ongoing	Legislative/Normative	2003	Medium
RO22	Individual billing of the consumers supplied by public district heating systems	Ongoing	Legislative/Normative	2009	High
RO24	Regulation of heat supply and use	Ongoing	Legislative/Normative	1994	Low
RO25	Energy Performance of New Buildings–building code	Ongoing	Legislative/Informative, Legislative/Normative	2007	Medium
RO27	Programs for thermal rehabilitation of the multi-level residential buildings built-up 1950–1990	Ongoing	Financial	2002	Medium
RO28	The promotion of the use of energy-efficient household electrical appliances and lamps	Proposed (advanced)	Financial, Information/Education, Legislative/Informative	2009	Medium
RO29	Energy efficiency improvement of heating-cooling systems on individual housing	Ongoing	Information/Education, Legislative/Informative, Legislative/Normative	2005	Medium
RO30	Energy Performance of existing Buildings–obligatory energy efficiency certificates	Ongoing	Financial, Information/Education, Legislative/Normative	2009	High
RO31	Energy labeling of new hot water boilers fired with liquid or gaseous fuels	Ongoing	Legislative/Informative Legislative/Normative	2003	Medium

Source: Energy Efficiency Policies and Measures in Romania, Energy Research and Modernizing Institute – ICEMENERG, 2009

ANNEX III – Planned amendments related to the GC system applying to RES

The Government proposed in 2010 several amendments that are currently under Parliamentary debate. The most important amendments are related to the GC assignation per type of RES:

- a) For electricity from hydro–electric power plants with installed powers of max. 10 MW:
 - I. 3 GC for each 1 MWh produced and delivered by newly built hydro power plants;
 - II. 2 GC for each 1 MWh produced and delivered by retrofitted hydro power plants;
- b) 1 GC 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 GC, until 2017, and 1 GC, 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.

ANNEX IV –Details of ERDF intervention for supporting RES development through SOP–IEC PA4/KAI 4.2⁹

Annex Table A – Approximate financial allocation (at KAI 4.2 level) (EUR million)

Year	TOTAL	EU Contribution (ERDF)	National Public Contribution*				Private Contribution
			State Budget	Local Budget	Other Public Sources	Total	
2007	12.2	6.3	1.1	0.0	0.0	1.1	4.8
2008	33.1	17.0	3.0	0.0	0.0	3.0	13.0
2009	66.3	34.2	6.0	0.1	0.0	6.1	26.0
2010	86.0	44.3	7.8	0.1	0.0	7.9	33.7
2011	89.7	46.2	8.1	0.1	0.0	8.2	35.2
2012	77.5	40.0	7.0	0.1	0.0	7.1	30.4
2013	68.5	35.3	6.2	0.1	0.0	3.3	26.9
TOTAL	433.3	223.5	39.3	0.5	0.0	39.8	170.1

* The distribution of the amounts between the three types of public sources is approximate; it can vary during the implementation subject to the types of projects and category of beneficiaries.

Annex Table B – Dimensions of the granted financing

Description of KAI	Assisting the investments in modernization and performing new electric and thermal energy producing capacities, by the utilization of regenerating energetic resources: biomass, hydro-energetic resources (in units with installed power less or equal to 10 M W), solar, wind, bio-combustible, geo-thermal resources and other regenerating energy resources	
Projects' value	Minimum RON 335,000 (Maximum EUR 50 million (including VAT) at INFO–EUR exchange rate on the date of handing in the financing application)	
Maximum value of the granted financing	RON 71 million	
Maximum dimension of the granted financing from the total of the eligible costs	<ul style="list-style-type: none"> – For beneficiaries public authorities / associations of inter-communitarian development (not entering under the incidence of state assistance)¹⁰ – For beneficiaries: enterprises (entering under the incidence of state assistance) 	<ul style="list-style-type: none"> Big enterprises: 50%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 40%; Medium sized enterprises: 60%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 50%; Small enterprises: 70%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 60%;

⁹Source: Framework Document of Implementation – SOP–IEC.

¹⁰In case of projects generating incomes for local public authorities / associations of inter-communitarian development the maximum dimension of the granted financing from the total of eligible costs will be established by the analyses of funding gap, according to Art. 55 of the EC Regulation no. 1083/2006.

Minimum eligible contribution of the beneficiary	<ul style="list-style-type: none"> – For beneficiaries public authorities / associations of inter-communitarian development (not entering under the incidence of state assistance) – For beneficiaries: enterprises 	<p>2%</p> <p>Big enterprises: 50%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 60%;</p> <p>Medium sized enterprises: 40%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 50%;</p> <p>Small enterprises: 30%, excepting the region Bucharest, Ilfov, where the maximum value of the financing is 40%;</p>
Communitarian contribution at the granted financing	<ul style="list-style-type: none"> – For beneficiaries public authorities / associations of inter-communitarian development not entering under the incidence of state assistance – For beneficiaries: enterprises 	<p>88.3%</p> <p>84.72%</p>
National public contribution at the granted financing	<ul style="list-style-type: none"> – For beneficiaries public authorities / associations of inter-communitarian development not entering under the incidence of state assistance – For beneficiaries: enterprises 	<p>11.7% (state budget)</p> <p>15.28% (state budget)</p>

ANNEX V – Details of ERDF intervention for supporting energy efficiency through ROP PA 1 KAI B3¹¹

B.3. Rehabilitation of social infrastructure, including social housing and improvement of social services

Rehabilitation of housing for the purpose of increasing energy efficiency is eligible under the category “rehabilitation of urban infrastructure and improvement of urban services”. If the integrated urban development plan comprises projects related to rehabilitation of housing, “the urban action zone¹²” must fulfil at least two of the following eligibility criteria:

¹¹Source: Framework Document of Implementation – ROP.

¹² Represents the target area of the integrated urban plan. In the case of small towns, it may reflect the entire town surface, while in the case of medium/large cities, it needs to be defined as a geographically delimited area of

- Low level/declining economic activities, ending traditional industrial activities;
- High levels of unemployment;
- High levels of poverty, characterized by low incomes and social exclusion;
- High number of people belonging to marginalized ethnic and/or minority group;
- Low level of education, low professional skills and high rate of school abandonment;
- Low level of security among the citizens, respectively high levels of delinquency, criminality, drug abuse and/or violence;
- Negative demographic trends;
- A destroyed, neglected or deteriorated built environment.

And at least one of the following criteria:

- Low level of housing prices;
- Low level of the buildings energy efficiency;

Intervention in energy efficiency is monitored through a dedicated output indicator:

Rehabilitated housing (No). Eligible beneficiaries are authorities of local public administration in urban areas.

Eligible activities include renovation of social housing and multi-family residential buildings including:

- The refurbishment of main structural parts of the building, roof, façade, staircase, inside and outside corridors, entrance and their exteriors, elevator;
- Technical installations of the building
- Energy efficiency actions

Eligible activities:

- Renovation of multi-family social housing:
 - Renovation of multi-family residential buildings (excluding areas within the flats), including:
 - The refurbishment of main structural parts of the building, roof, façade, staircase, inside and outside corridors, entrance and their exteriors, elevator;
 - Technical installations of the building
 - Energy efficiency actions

planned intervention. The integrated urban development plan must be implemented in urban action zones with a population of at least 20,000 inhabitants.

Eligibility criteria:

- The individual project must be one of the activities comprised within the integrated urban development plan;
- The project applicant must prove the ownership of the land/building or the lessee of the land/building, for a period of minimum 10 years;
- The project must have feasibility study and the appropriate notifications;
- The activities proposed for financing within the project must not have been financed from public funds in the last 5 years;
- The financial costs of the project must be comprised between the financial limits established for the individual projects;
- The proposed project must comply with the Spatial Planning and Urbanism
- Documents and to have the appropriate notifications for feasibility study;

Value of the projects (EUR million)	0.5 – 50
Maximum value of the grant	Not applicable
Eligible value of the projects (EUR million)	0.5 – 50
Maximum size of grant to total eligible cost	85%
Minimum eligible contribution of the beneficiary / applicant	2%
Community contribution to the support granted	85%
National public contribution to the support granted, out of which:	15%
State budget	13%
Local budgets	2%

ANNEX VI – Details of ERDF intervention for supporting energy efficiency through SOP-ENV PA 4 KAI B3¹³

Annex Table C – Indicative financial allocation for PA 4 (EUR million)

Year	TOTAL	EU contribution (Cohesion Fund)	National Public Contribution				Private contribution
			State budget	Local budget	Other public sources	Total	
2007	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	39.0	19.5	17.5	1.9	0.0	19.5	0.0
2009	66.2	33.1	29.8	3.3	0.0	33.1	0.0
2010	90.1	45.0	40.5	4.5	0.0	45.0	0.0

¹³Source: Framework Document of Implementation – SOP-ENV

Year	TOTAL	EU contribution (Cohesion Fund)	National Public Contribution				Private contribution
			State budget	Local budget	Other public sources	Total	
2011	75.8	37.9	34.1	3.8	0.0	37.9	0.0
2012	70.3	35.1	31.6	3.5	0.0	35.1	0.0
2013	117.1	58.6	52.7	5.9	0.0	58.6	0.0
TOTAL	458.5	229.3	206.3	22.9	0.0	229.3	0.0

Note: Within this PA are eligible major projects, with a total value over EUR 25 million. Maximum size of grant to total eligible cost is 95% (50% Cohesion Fund + 45% state & local budget).