

RO

Going 'super-green', but not right now

Climate action in EU Cohesion Policy
funding for Romania, 2014-2020

A person is seen from behind, standing on a balcony or walkway, looking out over a vast landscape. The sky is a deep red, suggesting a sunset or sunrise. The foreground is dark, and the person is in silhouette. The overall mood is contemplative and serene.

- While the 2020 targets are kept in focus as a main objective for how the Romanian energy policy is envisioned and implemented, a profound transformation of the entire energy system towards a cleaner one is clearly not yet a strategic objective of Romania.
- Energy-related strategies, while still being heavily reliant on coal, include: energy efficiency, improved systems for supporting RES, incentives for R&D, nuclear energy, hydrogen energy, natural gas as a 'transition fuel', complete integration in the internal energy market.
- The 'business-as-usual' scenario regarding climate change actions includes the 2020 targets. Some 'green' and 'super-green' scenarios are approached in an incremental manner, post-2020, but no major steps towards such scenarios are considered within national strategies or ESIF investments.
- Alternative scenarios based on completely phasing out fossil fuels and nuclear energy are not considered in the main energy strategies.
- Romania's strategy for climate mitigation is, in effect, mostly EU-led, in the sense that climate mitigation objectives are driven by EU targets and funded by EU funds, and the government does not envision additional or complementary policies to address climate change.
- Approximately 19.1 % of Romania's total EU Regional Development and Cohesion Funds are allocated towards climate objectives, one third of it - 6.27% - goes to clean energy.

PARTNERSHIP AGREEMENT (PA)

- Challenges and investment needs regarding the transport sector make no reference whatsoever to climate considerations. Greenhouse gas emissions are not evaluated as a challenge that needs to be addressed.
- Even though the potential for energy efficiency is operationalised by sector in the PA, the allocations do not always back up these findings.
- It is likely that the optimistic view that Romania is already on track to meeting its 2020 climate mitigation targets has led to a low priority for clean energy allocations.
- The coordination between climate mitigation objectives and other thematic objectives is very scarcely described in the Partnership Agreement.

Based on the sections concerning horizontal principles in both the PA and the OPs, sustainable development is barely mainstreamed throughout the programmes. Two relevant programmes [POIM and POR] stick to specific allocations in certain axes, while in the other programmes there are some small allocations of funds, but it is not clear on what types of projects they will be spent and what contribution they are expected to make towards climate change objectives.

LARGE INFRASTRUCTURE OPERATIONAL PROGRAMME (POIM)

- Almost half of the money in the Large Infrastructure Programme goes to Transport Infrastructure [48.2%], almost one third to Environmental Infrastructure [30.7%] and the rest is divided between Environment [9.9%], Sustainable Transport [5.8%] and Energy Infrastructure [5.5%].
- The allocations for the 'shift towards the low-carbon economy' are only 4.7%.
- Out of transport's largest slice of money, more than half [52%], is allocated to roads infrastructure, compared to 29% for railways and 11% for clean urban transport.
- The approach to investments in infrastructure is focused on improving the existing transport networks, not on financing the most sustainable alternatives.
- Most of the energy funds are allocated towards the renovation of public buildings to improve energy efficiency and to comply with EU legislation. EUR 94.8 million is allocated for renewable energy infrastructure, of which 90% for biomass and 10% for hydro and other renewables. There are no allocations for wind and solar energy production.

REGIONAL OPERATIONAL PROGRAMME (POR)

- The part of Thematic Objective 4 financed through POR focuses on two selected priorities: 1) energy efficiency [with a focus on buildings and public lighting] and 2) reduction of CO₂ emissions [with a focus on urban public transport]
- While almost 27% of the funds for regional development are dedicated to climate mitigation measures [energy efficiency and transportation], the OP only allocates the funding in specific priority axes that act towards a low-carbon economy, without integrating such measure throughout the other priority investments.
- The Regional OP includes three priority axes dedicated to climate change, but other priorities could include, within the project selection criteria, climate change mitigation conditions. For example, tourism development, health and educational infrastructure development, competitiveness in agriculture, fishery and aquaculture, all could contribute to energy efficiency and low-carbon economy if the implementation guides would mainstream climate change action.
- The other OPs have little impact on climate change action, as they do not directly contribute to the 'shift towards the low-carbon economy'.

GRAPH 67: Energy mix 2013 – Gross inland energy consumption by fuel type. Source: http://ec.europa.eu/priorities/energy-union/state-energy-union/docs/romania-national-factsheet_en.pdf

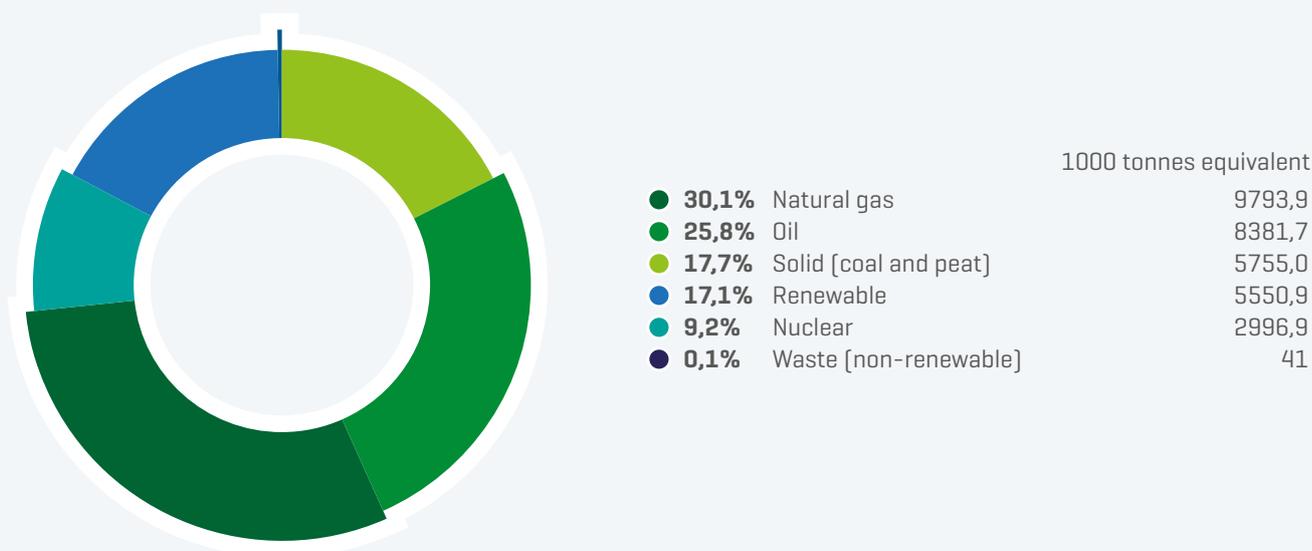


TABLE 16: EU targets for 2020, 2030 and progress towards 2020 objectives: higher ambitions possible

OP	Europe 2020	Romania 2020 targets	Romania's progress as of 2012
Reduction of greenhouse gas emissions	-20%	+19% [non-ETS]	-5.5%
Reduction of energy consumption through increased energy efficiency	-20%	-19%	-16.6%
Energy needs met from renewable energy	20%	24%	23.9%

EU TARGETS FOR 2020, 2030 AND PROGRESS TOWARDS 2020 OBJECTIVES: HIGHER AMBITIONS POSSIBLE¹⁷²

Romania is on course to meet its three EU 2020 energy targets. While GHG reductions are mostly a reflection of major economic shocks that occurred in the post-communist transition period since the baseline year 1990, as well as of the economic downturn since 2008, energy consumption maintains its declining trend¹⁷³.

RELATED COUNTRY DEVELOPMENT STRATEGIES AND NATIONAL REFORM PROGRAMMES: GOING FOR 'SUPER-GREEN', BUT NOT RIGHT NOW

In September 2015, the Romanian Ministry of Environment published for debate the National Strategy regarding Climate Change and Low Carbon Growth [CRESC Strategy]. It is worth

mentioning that the strategy was developed in the same period as the Operational Programmes for 2014-2020, thus it covers similar actions and policies in terms of energy efficiency and CO₂ emissions. The strategy's three main pillars : 1) reaching the national targets in line with European energy and climate policy, 2) an integrated intersectoral approach towards climate change and 3) maximizing economic and social benefits from the measures regarding climate change, are targeting the year 2030. The main scenarios were developed within a World Bank Report on climate change action to be included in the OPs for 2014-2020 in Romania. Thus, there are three potential scenarios on which the strategy is based: the status quo scenario, the 'green' scenario and the 'super-green' scenario.

¹⁷¹ http://ec.europa.eu/priorities/energy-union/state-energy-union/docs/romania-national-factsheet_en.pdf

¹⁷² http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_climate_change_and_energy

¹⁷³ https://ec.europa.eu/energy/sites/ener/files/documents/RO_Annual%20Report%202015_ro.pdf

The status quo scenario is the one in which the current targets are maintained (the 20-20-20 targets) and the trading emissions system is maintained. The green scenario doubles at least one target, the EU level GHG emissions target to 40% less than the 1990 level and includes climate mitigation actions. The super-green scenario aims at 80% reduction of GHGs at EU level and it envisions 'aggressive' green policies.

In terms of measures and potential actions, they are not clearly defined. For example, the energy sector is only defined by general objectives (renewable energy, energy efficiency of buildings, access to energy for vulnerable groups) but with no measures or actions mentioned,¹⁷⁴ while the transport sector has more clearly defined interventions.¹⁷⁵ Thus, while the strategy reinforces the Europe 2020 targets to be achieved by Romania, it does not provide clear indications on how 2030 targets on GHG emissions and high shares of energy efficiency and renewable energy sources will be achieved.

Regarding the financial aspect, the strategy states that in order to achieve the 2020 targets, there is need of investment of EUR 28 billion in 2015-2020, in order to reach the green scenario, EUR 40 billion, and for the super-green scenario EUR 64 billion. A great share of these sums is supposed to come from the EU structural funds. The

allocations from all EU funds including rural development and fisheries funding in 2014-2020 regarding climate change action are almost EUR 8.5 billion.¹⁷⁶

The National Action Plan on Energy Efficiency for 2014-2016, approved by the Romanian Government in 2014, is the implementation tool for the National Strategy regarding Climate Change and Low Carbon Growth. Most of the proposed actions overlap with the ones included in the OPs and a big share of the allocations for these actions comes from ESIF.

The national strategies follow the 2020 targets for Romania and some measures are planned in order to reduce the CO₂ emissions and improve energy efficiency. The main national strategies in respect to energy efficiency are based on scenarios in which the demand for energy increases. Romania does not plan to reduce the consumption from nuclear and fossil fuels in the near future, as the government still plans to invest in coal energy, hydro and nuclear energy, although without using European money for such investments.¹⁷⁷ Therefore, while the 2020 targets are kept in focus as a main objective for the way the Romanian energy policy is envisioned and implemented, a profound transformation of the entire energy system towards a cleaner one is clearly not yet a strategic objective of Romania.

174 National Strategy Regarding Climate Change and Low Carbon Growth (CRESC Strategy), p.44

175 National Strategy Regarding Climate Change and Low Carbon Growth (CRESC Strategy), Table 5, p. 49-50

176 National Strategy Regarding Climate Change and Low Carbon Growth (CRESC Strategy), p. 71

177 <http://gov.ro/ro/obiective/teme-majore/independenta-energetica>

OVERVIEW OF EUROPEAN STRUCTURAL AND INVESTMENT FUNDS IN ROMANIA

Analysis of disparities, development needs and potentials with reference to climate change mitigation and how it is addressed via Thematic Objectives

The Partnership Agreement addresses the analysis of disparities and development needs through five key challenges: the competitiveness and local development challenge, the people and society challenge, the infrastructure challenge, the resources challenge and the administration and government challenge. In the overview section, the PA is rather referring to other strategies and policies when it comes to climate change mitigation. The section acknowledges the advantage of Romania's limited dependence on imported energy and the energy mix, including renewable sources. The efficiency in energy use is reduced, due to poor insulation of both public and private buildings and poor transmission and distribution infrastructure. Natural and man-made environmental risks are considered from the perspective of the response capacity of state institutions. Water and wastewater infrastructure is considered one of the main priorities, being far from European standards in terms of re-use, recycling and energy recovery. Non-compliant landfills are to be phased out by 2017. Biodiversity and environmental quality remain key issues to be tackled. The need to move towards more sustainable practices in agriculture, construction industry and business in general is recognised.

CLIMATE RELATED ALLOCATIONS ACROSS ALL EU FUNDS IN ROMANIA

Romania's approximately EUR 30.6 billion EU funds, comprising the European Regional Development Fund, the Cohesion Fund as well as Rural Development and Fisheries Fund, will be allocated via nine Operational Programmes (OP):

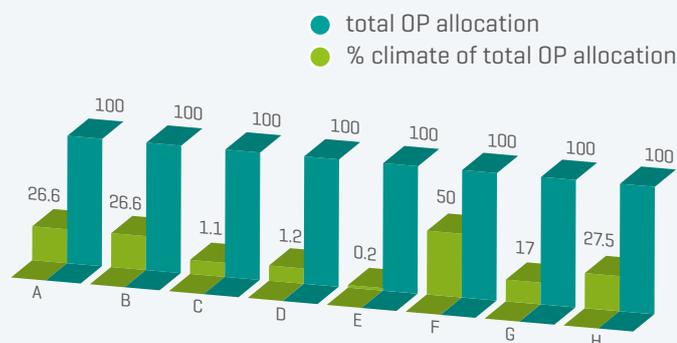
1. Large Infrastructure OP (ERDF & CF) - energy, transport, water, waste management, etc.
2. Regional OP (ERDF) - urban/local transport, energy efficiency, etc.
3. Human Capital OP (ESF & YEI)
4. Competitiveness OP (ERDF)
5. Administrative Capacity OP (ESF)
6. Technical Assistance OP (ERDF)
7. National Rural Development Programme (EAFRD)
8. Fisheries and Maritime Affairs OP (EMFF)
9. Territorial Cooperation (ERDF)

A European Council Decision in February 2013 decided that 20% of all EU budget spending for the programming period 2014-2020 should go to climate objectives.¹⁷⁸ In addition, the ERDF spending rules for 2014-2020 state that the minimum allocation for Thematic Objective 4 should be 20% in more developed regions, 15% in transition regions and 12% allocation for 'Shift Towards the Low-Carbon Economy' in less developed regions, respectively 15% if allocations from the Cohesion Fund are included. Most of Romania's regions (seven out of eight) are in the 'less developed' category¹⁷⁹ and one region (Bucuresti-Ilfov) is in the 'more developed' category. However, Romania is expected to reach 19.1% climate-related allocations in Cohesion Policy funds according to the climate tracking based on intervention categories.

¹⁷⁸ European Council, '7/8 February 2013 Conclusions (Multiannual Financial Framework', European Council, Bruxelles, 8th February 2013 [EUCO 37/13].

¹⁷⁹ COMMISSION IMPLEMENTING DECISION of 18 February 2014 setting out the list of regions eligible for funding from the European Regional Development Fund and the European Social Fund and of Member States eligible for funding from the Cohesion Fund for the period 2014-2020 (notified under document C(2014) 974) [2014/99/EU]

GRAPH 68: Allocations for climate change objectives in the Operational Programmes in Romania (Per cent)



- A Large Infrastructure OP (POIM)
- B Regional OP (POR)
- C Competitiveness OP (POC)
- D Human Capital OP (POCU)
- E Administrative Capacity OP (POCA)
- F National Rural Development Programme (PNDR)
- G Fisheries and Maritime Affairs OP (POPAM)
- H Total allocation for Romania

The most important Operational Programmes relevant to climate change mitigation are the Large Infrastructure Operational Programme and the Regional Operational Programme.

SUMMARY OF EX-ANTE EVALUATIONS REGARDING CLIMATE ACTION

The summary of the evaluation included in the Partnership Agreement offers very little substantial information about the findings that concern climate change targets. In fact, there is indication that the evaluation resulted in a decreased allocation for climate objectives. The assessment of the overall contribution of programmes to the Europe 2020 targets indicated that the allocations for T01, T02 and T010 needed to be increased. As a result, EUR 50 million from the ERDF was reallocated from 'Shift Towards the Low-Carbon Economy' to T01, thus decreasing the overall allocation for climate objectives. It is likely that the optimistic view that Romania is already on track to meeting its 2020

climate mitigation targets has led to T04 allocations being deprioritised.

SELECTED THEMATIC OBJECTIVES AND MAIN EXPECTED RESULT

The integration of climate mitigation objectives and other Thematic Objectives is very scarcely described in the Partnership Agreement.

The PA does not correlate the objectives under the 'competitiveness and local development' challenge with 'Shift Towards the Low-Carbon Economy' or T05. T03, 'Enhancing the competitiveness of small and medium-sized enterprises, the agricultural sector and the fisheries and aquaculture sector' is correlated with T04 through actions concerning agriculture, fishery, forestry and the blue economy. T05 is synchronized through specific measures concerning irrigation systems.

There is some correlation between the actions foreseen under T09 - promoting social inclusion, combating poverty and any discrimination and those planned under T04 in rehabilitation of health infrastructure will also aim to improve the energy efficiency of the refurbished infrastructure.¹⁸¹

The document also states that there will be correlation between the interventions prioritised under T010 - investing in education, training and vocational training for skills and lifelong learning and T04, T05 and T06, but it is not specified how this correlation will be achieved.¹⁸²

The proposed interventions under T07 - promoting sustainable transport, are directly linked to the Europe 2020 climate mitigation target of reducing GHG emissions. The investment priorities (development of all modes of transport - road, rail, inter-modal, maritime, air, as well as safety improvements and customs modernisations) are expected to result in reduced travel time, a more sustainable transport mix with more passengers transported on rail and water, and improved governance of the sector. The expectation that passengers will migrate from roads to rail and water transport is, however, in disconnect with the financial allocations that favour road development and modernisation over investments in the rail and water sectors.

Under the T0 4 'Supporting the shift towards a low-carbon economy in all sectors', there are 14 proposed priorities for funding. They are based on the main development needs described above and they aim at energy efficiency actions (improved distribution, high efficiency low power

180 National Strategy Concerning Climate Change and Low-Carbon Economic Growth, Ministry for the Environment, Water and Forestry, September 2015 (draft under consultation)

181 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 168.

182 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 172.

cogeneration systems, monitoring systems, building insulations, etc.), transport efficiency and sustainable mobility, increased usage of RES (in general and more specific in agriculture), reducing GHGs in agriculture.¹⁸³ The PA states that energy efficiency objectives will be encouraged through the horizontal criteria as well. In terms of expected results, they are a little more specific than the priorities. The main results are split by fund in the PA, namely ERDF will contribute majorly to: urban public transport, reduced GHG emissions, increased energy efficiency in buildings and industry, increased access to smart grid services, increased share of energy from renewable sources in total energy consumption (due to investments aimed at increasing installed power in RES producers), increased energy efficiency in the district heating system in selected cities [except Bucharest]¹⁸⁴. The heating system in Bucharest will be covered by CF¹⁸⁵.

T07, 'promoting sustainable transport and removing bottlenecks in key network infrastructures', addresses the energy transportation infrastructure and aims at the development of smart electricity transmissions systems that can use RES; the development of a smart gas transmission system and urban transportation in the Bucharest-Ilfov region¹⁸⁶.

OVERVIEW OF THE LARGE INFRASTRUCTURE OP AND THE REGIONAL DEVELOPMENT OP

The Large Infrastructure Operational Programme (POIM)

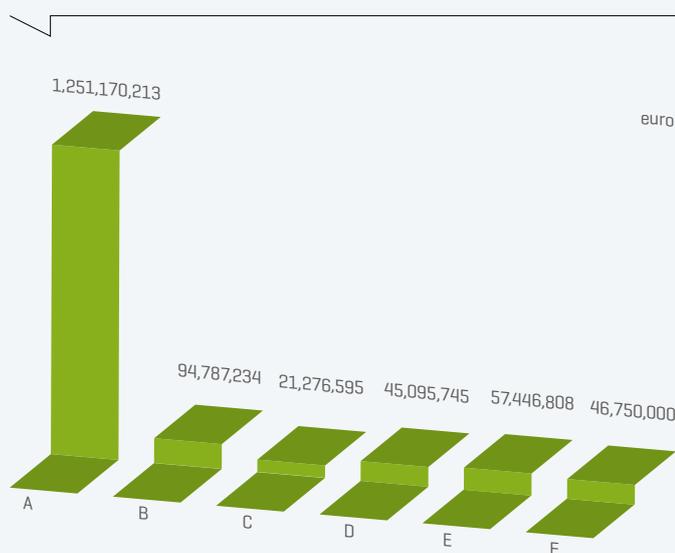
The Infrastructure OP addresses four development needs: transport infrastructure, environmental protection, climate change mitigation and adaptation, and energy efficiency.

The approximately EUR 9.5 billion in funding is divided between four Thematic Objectives and can be traced by the intervention field codes in five categories of intervention: Energy Infrastructure, Transport, Sustainable Transport, Environment and Environment Infrastructure.

Almost half of the money goes to Transport Infrastructure (48.2%), almost one third to Environmental Infrastructure (30.7 %) and the rest is divided between Environment (9.9%), Sustainable Transport (5.8%) and Energy Infrastructure (5.5%).

The argument put forward in the OP for such a high allocation to transport infrastructure is that the 'HEROM' modelling concerning different development scenarios for the period 2014-2020, applied at the level of the Partnership Agreement, suggested that a larger allocation for transport infrastructure would lead to a more significant increase in the GDP. The model estimated the impact on GDP, employment and labour productivity of four different allocation scenarios, and concluded that the scenario with the best impact on these indicators is the scenario that favours allocations towards infrastructure, while maintaining ESF funding at a lower level. However, the model is not oriented towards climate and environmental indicators such as GHG emissions, nor does it estimate impacts for the horizons 2030 and 2050. The fact that this model was used as one of the prevalent arguments in allocating EU funds is a clear indication that climate objectives were only a secondary concern and not thoroughly mainstreamed in the EU funds' planning process.

GRAPH 69: Different types of energy infrastructure investments. Source: our own calculations based on approved Operational Programmes according to categories of intervention



- A Energy Efficiency
- B Renewable Energy Sources
- C Electricity transmission, storage
- D Smart Grid
- E Co-generation, district heating
- F Gas

183 Partnership Agreement, Romania, 2014R016M8PA001.1.2, pp. 178-179;

184 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 180

185 *ibid.*

186 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 185

187 POR, p. 29-30

The Regional Operational Programme (POR)

The part of T04 financed through POR will focus on two selected priorities: 1) energy efficiency [with a focus on buildings and public lighting] and 2) reduction of CO₂ emissions [with a focus on urban public transportation]¹⁸⁷. T04 is the Thematic Objective with the highest allocation from POR, with 44.19% of the programme funds going towards Priority Axis 3 – support for the transition towards a low-carbon economy.

Other priority axes do not specifically mention energy efficiency measures or low-carbon consumption within their goals. While all of these investment priorities could have included energy efficiency horizontal measures [for example all infrastructure built or modernised with these funds should be made energy efficient or all equipment should be eco-labelled, etc.], the OP does not actually integrate climate mitigation horizontal measures.

In conclusion, while a big share of the funds for regional development are dedicated to climate mitigation measures [energy efficiency and transportation], the OP only allocates the funding in specific priority axes that act towards a low-carbon economy, without integrating such measures throughout the other priority investments.

CONTRIBUTIONS OF EU FUNDS TO CLIMATE OBJECTIVES

More ambitious scenarios

According to the National Strategy regarding climate change and low carbon growth, compared to the status-quo scenarios [2020 targets], the green scenario increases the GHG emissions target to 40% at EU level below the 1990 level. The super-green scenario aims at 80% reduction of GHGs at EU level and it envisions 'aggressive' green policies.

The strategy approaches GHG emissions sectorally, through specific objectives on each sector [energy, transport, industry, agriculture and rural development, urban development, waste management, water, forestry]. In terms of measures and potential actions, they are not clearly defined. Apart from EU funded investments, the strategy mentions interventions for the reduction of GHG emissions such as taxation on gas, electric buses, taxation of air transportation, etc.

However, the EU funds allocations for 2014-2020 do not exactly pave the way for the green and super-green visions, with the majority of infrastructure funds allocated to roads development and modernisation and modest GHG emissions reduction measures.

The infrastructure challenge according to the PA

This section of the Partnership Agreement analyses the disparities and challenges in ICT infrastructure and, more relevant for climate change mitigation, transport infrastructure, but the analysis is not based on a climate change mitigation perspective. General problems identified for the transport sector include the poor connectivity of transport modes, bottlenecks in the network, long travel times and unequal accessibility, as well as high development costs for new infrastructure because of natural barriers [the Carpathian mountains and the Danube river and delta]. The PA acknowledges that the sector has been characterised by a lack of a strategic approach with regards to the development of infrastructure, and that the absorption of EU funds for transport between 2007-2013 was very low due to incoherent policy and administrative deficiencies.

It is striking that the analysis of disparities, challenges and investment needs regarding the transport sector makes no reference whatsoever to climate considerations. Greenhouse gas emissions are not evaluated as a challenge that needs to be addressed. This is in spite of the fact that, according to the Ministry of the Environment and Climate Change, in the absence of specific measures to reduce them, GHG emissions are estimated to increase by over 28% by 2023 compared to 2012¹⁹⁰.

Roads

The analysis highlights the main problems of the roads infrastructure, from the perspective of improving roads – not reducing their impact on climate change. Road transport has increased more than five-fold since the baseline year, from about 1 million vehicles in 1990 to 5.42 million in 2010¹⁹¹, with serious consequences for human life as well as the environment. The poor quality of roads generates a very high incidence of accidents leading to fatalities and injuries. While the number of fatalities is currently decreasing at a rate of 1.5% every year, this is happening at a much slower rate than the EU average of 5% annual decrease in road accident fatalities. Moreover, the road infrastructure was not designed to bypass inhabited areas, and the lack of ring roads around most cities and villages leads to increased travel times, very high fuel consumption, high

188 POR, p. 38

189 National Strategy Regarding Climate Change and Low-Carbon Growth (CRESC Strategy), Table 5, p. 49-50

190 Regional Operational Programme, p. 83.

191 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 96

pollution levels and poor air quality in larger cities. The analysis suggests that modernising existing roads and building new ring roads would have a positive environmental impact by means of reducing travel times and indirectly reducing fuel consumption per distance, but it does not evaluate the potential effects of road construction in terms of increasing individual and freight transport on roads. In fact, throughout the analysis of the roads infrastructure challenge, the general focus is on transport efficiency rather than sustainability.

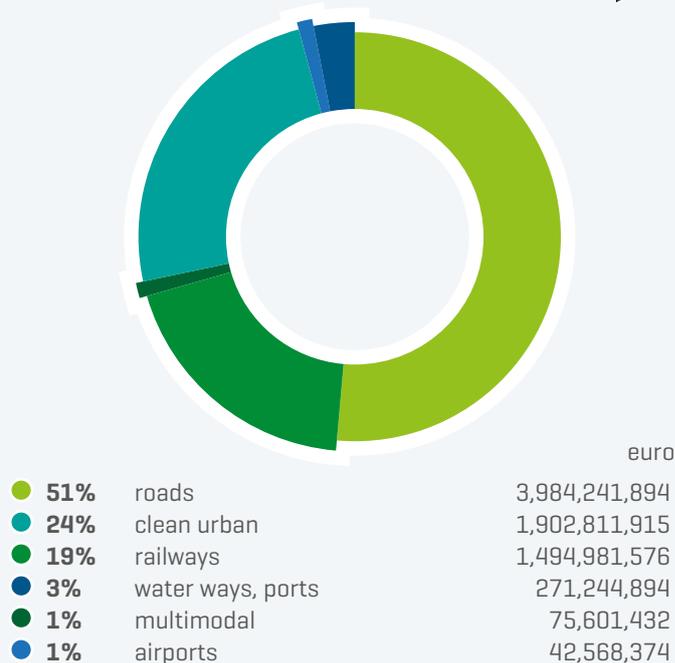
Railways

The PA acknowledges the fact that the lack of strategic investment in the rail network has rendered rail transport unreliable, uncompetitive and thus unable to provide a sustainable alternative to road transport. Almost 40% of the current railway network is assessed as operating beyond its lifetime and about 70% of rolling stock is outdated¹⁹². Just between 2007 and 2012, rail traffic reduced by 11% mainly due to low quality of services (poor consumer experience, speed restrictions, increased travel times). If the trend continues, the passenger traffic will have dropped by 97% compared to 1990¹⁹³. The railway network will be reduced as per the Stand-by Agreement with the IMF and EC (2011) to a dimension that can be managed and maintained with the available financial resources, so as to increase the quality of services. While railway development is clearly understood as an investment in sustainable transport, again this section highlights the need to make the railway system more efficient and economically viable in itself, not necessarily as an alternative to road transport. What is missing in the analysis is a strategy as to how to move passengers from fossil-intensive modes of transport to cleaner modes – for instance by developing the railway network in parallel to the most congested roads, to act like a valve and absorb passenger traffic from the roads.

Transport infrastructure funds from POIM

Transport infrastructure has the biggest share of funds in the Large Infrastructure OP, of a little more than EUR 5 billion. In spite of the fact that road transport has already increased more than 500% since 1990 and, as the analysis of disparities in the PA acknowledges, this increase has had serious consequences for both human life and the environment, and in spite of the fact that road transport alone accounts for 93% of the GHG emissions from transport, roads take up roughly 52% of the ESIF funds for transport infrastructure, approximately EUR 2.6 billion. The other 48% is divided between railways (29%), clean urban transport (11%), waterways and ports (5%), multimodal transport (2%) and airports (1%). There are no funds allocated for cycle tracks or footpaths.

GRAPH 70: Share of transport modes in total transport funding in Romania. Source: our own calculations based on approved Operational Programmes according to categories of intervention



In the strategy section of the OP, the arguments presented in support of the high allocation for roads are that large amounts are necessary just to finalise the projects that were started in the period until 2013, and that even these new allocations are not sufficient to finalise the TEN-T network. A second argument is that additional funding for railways is available through the CEF, which would balance the cumulative allocations (ESIF plus CEF) to 44% for roads and 40% for railways¹⁹⁴.

Transport infrastructure and clean urban transport funds from POR

When it comes to transportation, the OP states that if no measures are taken in regard to GHG emissions, they are estimated to increase by 28% by 2023. Thus, the indicators used refer to the number of passengers using public transportation and the reduction of GHG emissions coming from transportation in urban areas¹⁹⁵.

The Priority Axis 4 – support for sustainable urban development, includes an investment priority regarding the reduction of CO₂ emissions¹⁹⁶, focused on urban transportation, that finances the same measures as the transportation priority under Priority Axis 3: investments in public transportation at urban level, investments

192 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 94.

193 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 95.

194 POIM, p. 33.

195 POR, p. 82-83.

196 POR, p.

197 POR, p. 98 [for AP4] and p. 85 [for AP3, transport priority]

198 POP, p. 137

GRAPH 71: Share of energy from renewable sources (in % of gross final energy consumption)

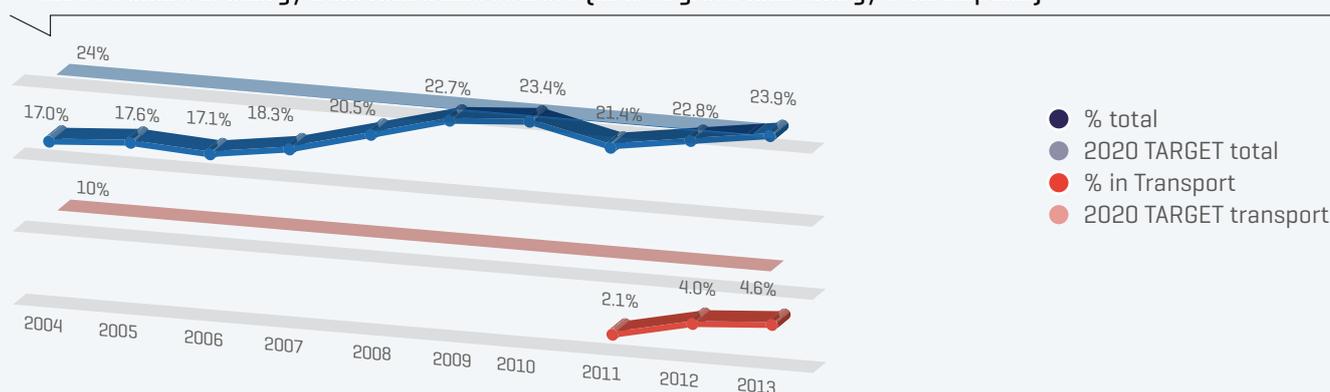


TABLE 17: Estimates of Romania's theoretical renewable energy potential, according to Romania's Regulatory Authority for Energy

Source	Annual potential	To be used for
Solar	60 PJ/year	Heat
	1.2 TWh	Electricity
Wind	23 TWh	Electricity
Hydro of which under 10 MW	36 TWh	Electricity
	3.6 TWh	
Biomass and biogas	318 PJ	Heat and Electricity
Geothermal	7 PJ	Heat

in unmotorised and electric transportation and other investments meant for reducing CO₂ emissions in urban areas¹⁹⁷.

Priority Axis 6, dedicated to regional level road infrastructure, mostly finances the building and repairing of country level roads, with the stated goal of increased speed of transportation. There is no reference to climate change or CO₂ emission as such, however, secondary actions include cycling infrastructure and shelterbelts¹⁹⁸.

RENEWABLE ENERGY

Status quo and 2020 targets

While the share of energy from renewable sources in the gross final energy consumption is already very close to the 2020 target, the share of renewable energy in the transport sector is lagging far behind its target.¹⁹⁹

It is significant that, in evaluating the potential sources for renewable energy, the largest share is attributed to biomass and biogas. Biomass energy production also receives the greatest share of the allocations for renewable energy production in the Large Infrastructure Operational Programme, due to the fact that this source of energy is currently the least exploited in comparison with its estimated potential. However, the sustainability of biomass sources for renewable energy is not carefully considered. Furthermore, 10% of the potential for hydro energy is

attributed to small plants (under 10 MW), but it is well worth mentioning that a multitude of projects for micro-hydro-plants has been undertaken in Romania in recent years with devastating impacts for the ecosystems in which they were built²⁰¹. However, due in part to efforts from civil society organisations that have been watching and documenting the impact of micro-hydro-plants on mountain rivers, and who were part of the ESIF programming as NGO partners, such projects will not be eligible to receive EU funds because of their highly detrimental impact on ecosystems.

More ambitious scenarios

In the National Strategy Regarding Climate Change and Low-Carbon Growth, the energy sector is only defined by general objectives (renewable energy, energy efficiency of buildings, access to energy for vulnerable groups) but with no measures or actions mentioned²⁰².

The National Action Plan on Energy Efficiency for 2014-2016, approved by the Romanian Government in 2014, is again in

199 Source: Eurostat, <http://ec.europa.eu/eurostat/documents/2995521/6734513/8-10032015-AP-EN.pdf/3a8c018d-3d9f-4f1d-95ad-832ed3a20a6b>

200 Presentation by Vice-President of Romanian Energy Regulatory Authority, April 2012, <http://www.econet-romania.com/files/documents/27April12/Vortrag%20ANRE.pdf>

201 WWF Romania, Legislative Analysis Report on the Process of Planning and Emitting Regulations Concerning the Building and Functioning of Micro-Hydro-Power-Plants in Romania, October 2013, http://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_raport_legal_mhc_1.pdf

202 National Strategy Regarding Climate Change and Low Carbon Growth (CRESC Strategy), p.44

line with the Europe 2020 targets and it is the implementation tool for the National Strategy Regarding Climate Change and Low-Carbon Growth, providing a detailed plan for both investments and policy/capacity actions for each sector with each objective stated in the National Strategy Regarding Climate Change and Low-Carbon Growth. Most of the proposed actions overlap with the ones included in the OPs. Moreover, a big share of the allocations for these actions comes from ESIF. The rest is funded from the state budget and private funding, but in instances in which the OPs do not cover the action, the estimated value of the action is not specified. For example, the National Action Plan states that, for measures regarding the promotion of renewable energy sources within 2016-2023, the investments will be based on EU funds (EUR 57.45 million from the Large Infrastructure OP – money allocated to high-efficiency cogeneration) and state budget (EUR 94.7 million)²⁰³. However, for other measures, the allocations between state funding, private funding and EU funds are not clearly stated.

Energy infrastructure – funds for renewable energy from POIM

As most of the funds for energy infrastructure go to renovation of public infrastructure, approximately 18.4% of the category's EUR 2.9 billion is allocated to measures supporting renewable energy (biomass and hydro), with some additional 11.16% going to high-efficiency cogeneration. There is no allocation for wind and solar renewable energy, only for biomass (16.6%) and other renewables including hydro and geothermal (1.84%).

Biomass and other RES such as geothermal and, to a lesser extent, hydro are being prioritised because they are perceived as lagging far behind their potential. According to the strategic analysis in the OP, RE sources such as wind and solar are on track or even beyond their 2020 targets of installed power, mostly as a result of the ETS. Biomass (electric and heat), micro-hydro and geothermal, on the other hand, are lagging behind their 2020 targets, while the governmental facilities using ETS have been reduced. This is why the largest share of investment in RES from the POIM has been allocated to biomass. Neither the PA nor the OP makes any provisions concerning the sustainability of renewable energy from biomass, but only that such projects would have to abide by environmental regulations. According to the implementing guide for this measure²⁰⁴, individual project applicants who wish to initiate biomass energy generation projects would have to include among the application documents a written assessment (study) of the potential of the renewable resource.

Such a document would only evaluate the sustainability of using biomass in individual projects, in terms of whether the business is viable longer term, or likely to run out of resources, but it would make no indication as to the impact of using biomass on a large scale.

As far as the funding for micro-hydro projects is concerned, the Infrastructure OP clearly states that 'because micro-hydro projects have a negative impact on the environment, such projects will not be supported through POIM.'²⁰⁵

High-efficiency cogeneration is also being supported with over EUR 57 million, primarily because it is believed that it will generate more energy efficiency for large enterprises and keep them economically competitive in the context of the upcoming liberalisation of energy prices assumed by Romania by 2020. On the other hand, approximately half of the installed power in cogeneration installations in 2012 was in units that burn fossil fuels.

Developing more cogeneration units that depend on fossil fuels is not a sustainable solution and, while it can contribute to achieving GHG emissions reductions in the short term, in the longer run it would hinder the transition to a low-carbon economy, creating jobs and other types of dependencies on fossil fuels. The implementing guide does limit the use of fossil fuels in installations that use biomass for cogeneration, in that fossil fuels may only be used for shut-down²⁰⁶.

ENERGY EFFICIENCY

The national strategies follow the 2020 targets for Romania and some measures are planned in order to reduce the CO₂ emissions and improve energy efficiency. However, Romania does not plan to reduce the consumption from nuclear and fossil fuels in the near future, as the government still plans to invest in coal energy, hydro and nuclear energy, although without using European money for such investments.²⁰⁷

Romania's Energy Strategy for 2015-2035²⁰⁸ states the same national targets and the fact that the 2030 indicators will be based on reaching the 20-20-20 targets. For 2035, the strategy takes into account the EU energy policy, but the national strategy is based on: energy efficiency, improved systems for supporting RES, incentives for R&D, nuclear energy, hydrogen energy, natural gas as a 'transition fuel', complete integration in the internal energy market²⁰⁹.

203 The National Action Plan on Energy Efficiency for 2014-2016, p. 12

204 Applicants Guide, Priority Axis 6, Specific Objective 6.1. Increasing the Production of Energy from Less Exploited Renewable Sources, p. 12.

205 POIM, p. 17.

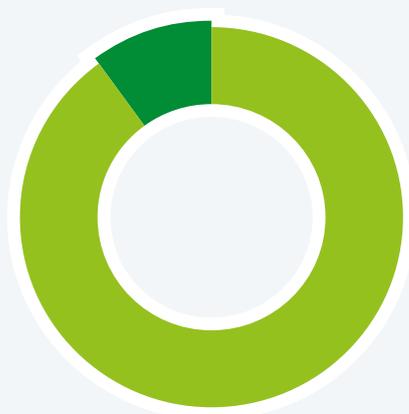
206 Applicant's Guide for Axis 6, OS6.1_RES, POIM, published for consultation until October 2015, p. 12.

207 <http://gov.ro/ro/obiective/teme-majore/independenta-energetica>

208 The draft for public debate available at <http://energie.gov.ro/anunturi>

209 Romania's Energy Strategy 2015-2035, draft, p. 95

GRAPH 72: Split of renewable energy sources by technology.
 Source: our own calculations based on approved Operational Programmes according to categories of intervention



● 90%	biomass	85,308,511
● 10%	other (hydroelectric, geothermal, renewables integration)	9,478,723
● 0%	solar	0
● 0%	wind	0

GRAPH 73: Energy efficiency allocations by type of beneficiary. Source: our own calculations based on approved Operational Programmes according to categories of intervention



● 55%	EE public buildings	688,370,706
● 45%	EE housing	562,799,507
● 0%	EE SMEs	0
● 0%	EE large enterprises	0

Public intervention is needed for upgrading the electricity transmission in order to reduce loss and ensure supply security, the infrastructure being mostly built in the 1970s. However, the allocations under the Large Infrastructure OP for energy infrastructure are rather small compared to other areas – being 5.5% of the OP, out of which only 4% goes towards electricity storage and transmission and almost 9% for Intelligent Energy Distribution Systems (including smart grids).

Even though the potential for energy efficiency is operationalised by sector in the PA, the allocations do not always back up these findings. For example, if we look at the category allocations related to climate change, there is zero allocation for ‘energy efficiency and demonstration projects in SMEs and supporting measures’, ‘support to environmentally-friendly production processes and resource efficiency in SMEs’ or ‘promotion of energy efficiency in large enterprises’ although there is likely to be some energy saving potential.

The main development solution in order to achieve the targets is seen as financial instruments targeted to specific sectors that can ensure energy efficiency investments.

The Natural Gas Transmission system is outdated, according to the PA and for some of the ongoing projects on interconnectivity to the transmission systems of gas of the neighboring countries [Hungary, Bulgaria, Moldova]. It is stated that ESI support is needed for pipeline upgrades, new pipelines and new compression stations²¹⁰. There is an allocation in the Large Infrastructure OP to develop or modernise the National System for the Transport of Natural Gas by building new pipelines, as well as to improve interconnections with the systems of neighboring countries.

Energy efficiency funds from POR

One of the development needs addressed by the Regional Operation Programme is the unsustainable use of energy and the high potential for energy savings when it comes to both public and private buildings²¹¹. The programme also addresses public lighting as a source of energy savings. The centralised production and distribution systems for thermic energy [mostly based on gas] are unsustainable, the loss in 2012, for example, being equal with the quantity of energy produced for three development regions²¹². A great share of the CO₂ emissions is attributed to urban transportation²¹³.

In terms of specific indicators, they are defined in the report to the 2012 values and the target values is 2023: the usage of final energy in public buildings, the usage of final energy in the

210 PA, p. 107
 211 POR, p. 10
 212 ibid.
 213 POR, p. 11

residential sector and the usage of final energy in public lighting. into account.

Energy infrastructure funds from POIM

About half of the money in this category will be spent on energy efficiency renovation of public infrastructure, demonstration projects and supporting measures. This decision appears to be in line with the argument made in the first section of the PA that the efficiency in energy use is reduced, due to poor insulation of both public and private buildings and poor transmission and distribution infrastructure. However, the allocation in POIM only refers to the renovation of public infrastructure, and does not include the existing housing stock, which is covered by the Regional Operational Programme (POR).

There is one other measure in the entire OP aiming to increase energy efficiency in the industrial sector by introducing an electricity consumption monitoring system for industrial consumers. Its expected result is that industrial users would be more aware of their energy consumption and will be encouraged to reduce it. It is estimated that monitoring alone may reduce electricity consumption by 3-5%.

CONTRIBUTIONS OF OTHER OPERATIONAL PROGRAMMES TO CLIMATE OBJECTIVES

Competitiveness and local development

The competitiveness and local development challenge according to the PA

The development needs set out in this section are economic growth needs, considering challenging market conditions, low business density, low value-adding economic activities, FDI, exports, ITC sector, etc. Climate change is mentioned only in regard to agriculture, and insurance and risk management instruments are given as potential solutions for the way climate change impacts agriculture.

With regard to fishing and aquaculture, the needs assessment refers to needs in terms of infrastructure. While the PA states that Romania needs to comply with Common Fisheries Policy rules, the key point in the document is that other Black Sea countries do not have to comply with the same rules, thus affecting Romania's competitiveness.

One of the sectors in which energy, environment and climate change are set out as priorities is the R&D sector, but the only mention regarding targets in respect to low-carbon energy technologies is the SET Plan, which should be taken

The Competitiveness Operational Programme (POC)

The Competitiveness Operational Programme (POC) does not directly finance climate actions. However, when it comes to research and development measures, environment and climate change is one of the financed research areas; there is also support for research organisations to take part in the Horizon 2020 programme (which includes funding of research on environment, climate change, energy efficiency, etc.); the support for ITC solutions in public services and cloud computing contributes to the reduction of CO₂ emissions²¹⁴.

PEOPLE, SOCIETY AND ADMINISTRATION

The people and society challenge according to the PA

This section deals with the needs for development concerning employment and labour mobility, poverty, social inclusion and education. The main challenge identified is the very low level of demand on the labour market, which generates a low domestic employment rate, low wages, a highly selective labour market and international migration.

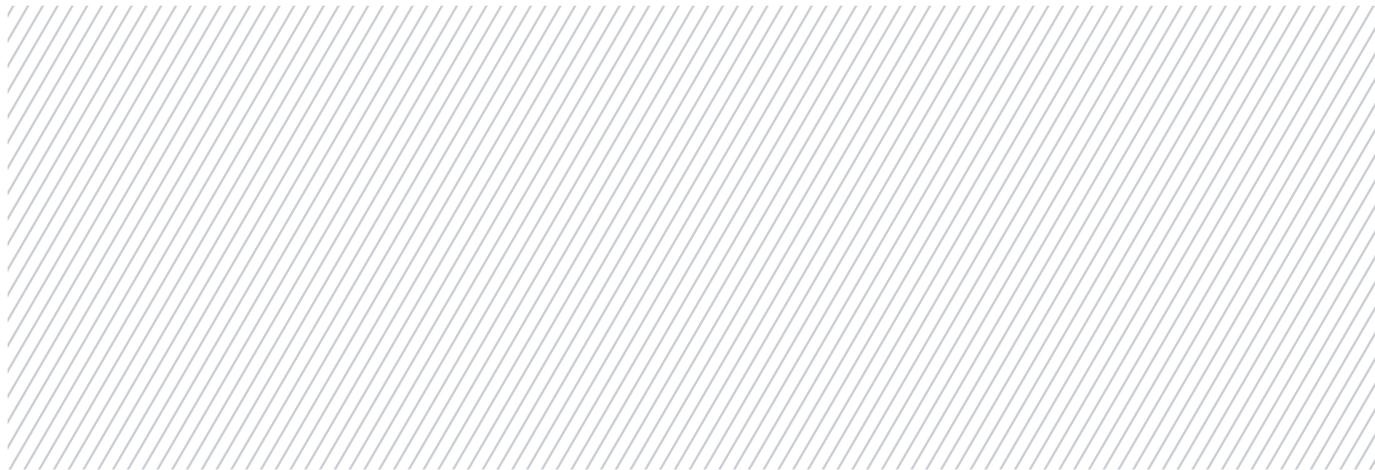
While this section deals mostly with human resources and social issues, there is potential for climate mainstreaming that remains mostly untapped in at least two areas:

Firstly, the priorities for investment towards employment, labour mobility and education could be targeted at helping the labour force transition from an energy-intensive way of doing business to a low-carbon economy, to anticipate the decreasing number of jobs in the fossil-fuel industry and increasing number of jobs in the RE sector. The PA mentions that investments in education and vocational training will be focused on 'those areas with growth potential that contribute to the increasing of the employability of higher education graduates in the competitive sectors and/or traditional sectors'²¹⁵, but there is no clear reference to training that would support the shift towards a low-carbon economy (for example, academic and skills training and other professional conversion mechanisms for people who currently work in the mining industry or fossil-fuel installations, and in general for moving the labour force currently in high-energy industries towards low-carbon industries).

Secondly, climate change could also be considered when it comes to investments in the physical infrastructure for education, healthcare, social assistance and other services. The PA takes this into account when discussing the healthcare infrastructure. One measure is to reduce

²¹⁴ POC, p. 154

²¹⁵ Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 88



administrative costs, including through energy efficiency measures where feasible²¹⁶, because the analysis reveals that 'most county level hospitals do not meet the EU standards and are energy inefficient, incurring high costs for providing heating'²¹⁷. However, the analysis of the needs for investments in education infrastructure does not refer to improving the energy efficiency of educational buildings.

Within the administration and government challenge, there is little reference to climate change.

Human Capital Operational Programme (POCU)

The Human Capital OP funds projects under T08, T09 and T010, with funding from the ESF and YEI. Climate action as such will not be funded in any of the POCU axes, but according to the programme documents, there is an indicative allocation in support of climate change objectives according to Dimension 6 of EUR 52.9 million, representing 1.22% of total programme allocation. Based on the description of priority investments, it is possible that in certain projects that aim to improve the infrastructure for social services and healthcare, buildings could be rehabilitated to be more efficient with regards to energy consumption. However, in these cases, the hard intervention on infrastructures would be funded in complementarity with the POCU projects from ERDF through the Regional Operational Programme [POR] in urban areas or from EAFRD through the National Rural Development Programme in rural areas.

The only other mention of climate objectives is that POCU will support initiatives for skills training for competitive economic sectors, which might include, among others, specialisations related to energy, environmental management and climate change.

In the section evaluating the application of horizontal principles, the document also refers to supporting the transition towards

'green jobs' with specific skills training in the fields of energy efficiency, renewable resources, recycling and using low carbon technologies, as well as training for green procurement. However, such skills training is only mentioned in the horizontal principles section of the OP, it is not set as a specific objective in any of the programme's axes and there is no specific allocation of funds. As a matter of consequence, it can be understood that such initiatives would be supported but not actively encouraged, and that they may or may not occur based on the interests of the funding beneficiaries.

Administrative Capacity Operational Programme (POCA)

The OP on Administrative Capacity does not directly refer to T04 or T05. According to the OP, the only contributions in regard to climate change actions are awareness-raising actions on energy efficiency with general outreach²¹⁸. The indicative support for climate change objectives according to Dimension 6 – is EUR 1.2 million out of Axis 1, representing 0.22% of total programme funds.

THE APPLICATION OF HORIZONTAL PRINCIPLES AND POLICY OBJECTIVES FOR THE IMPLEMENTATION OF THE ESI FUNDS

The section of the Partnership Agreement describing the mainstreaming of sustainable development in the process of preparation and implementation of the EU funds 2014-2020 brings little information, for the most part repeating some compulsory steps of the process and stating that sustainable development principles will be duly considered in all programmes. No concrete measures to ensure the application of the horizontal principle of sustainable development are put forward, other than stating that EU environmental rules and regulations will be respected, nor do other horizontal policy measures address climate change mitigation. The PA thus opens up the expectation that the individual OPs will be more consistent in operationalising the implementation of horizontal principles.

²¹⁶ Partnership Agreement, Romania, 2014R016M8PA001.1.2, , p. 63

²¹⁷ Partnership Agreement, Romania, 2014R016M8PA001.1.2, , p. 66

²¹⁸ POCA, p. 93

In the preparation phase, the mainstreaming of sustainable development consists of:

- Ex-ante evaluations, assessing the degree to which the planned measures in each programme promote sustainable development and avoid or mitigate significant environmental impacts.
- Strategic Environmental Assessment (SEA) for the OPs.
- The PA mentions that the priorities within T06 on biodiversity and Natura 2000 will be linked to priorities on climate change adaptation from T05 and priorities within T01 and T03, but not specifically what those links might be and what they are supposed to achieve.
- Respecting EU environmental acquis and requirements in general concerning biodiversity [for example, in the planning of measures for inland water transport development].
- Tracking climate-related investments through the codes of intervention fields.

The provisions concerning the implementation phase are also, basically, a set of minimum requirements that any project should abide by:

- Unspecified tools should ensure that the projects funded are in line with the principles of sustainable development²¹⁹ [i.e., that projects use resources efficiently, preferably renewable ones, that waste is minimised and properly managed, that they use green procurements beyond what the legislation imposes²²⁰, that they are not harmful to the environment, supporting actions to mitigate any remaining impacts, promoting a proactive approach to risk management].
- The PA also states that in the selection process, 'all projects will be assessed from an environmental perspective to determine if the impact of the

operation is limited or insignificant. For the operations where the environmental impact is expected to be significant the Environmental Impact Assessment (EIA) will be performed. For the major investment projects a CBA and risk assessment will be performed²²¹.

- Additionally, the Management Authorities are supposed to raise awareness and 'provide support to beneficiaries to deal with the environmental issues in all phases of their projects', and to include sustainable development and green procurement as topics for training programmes for the beneficiaries.

However, there is no indication as to how much any of these criteria will weigh in the selection process, and whether the more climate-conscious projects will truly possess an advantage. Such tools, requirements and encouragements were also present in the implementing period 2007-2013. If the previous experience is any indication, the effective application of this horizontal principle is certainly not a priority for most projects, but mostly just ticking a box in the application form for a few extra points in the selection process, with a weight of as little as 4%.

Furthermore, the Operational Programmes are, in general, no more specific as to how the horizontal principles will be implemented. Based on the sections concerning horizontal principles in both the AP and the OPs, sustainable development is barely mainstreamed throughout the programmes, rather the two relevant programmes (POIM and POR) stick to specific allocations in certain axes, while in the other programmes there are some small allocations of funds, but it is not clear on what types of projects they will be spent and what contribution they are expected to make towards climate change objectives.

219 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 201.

220 Government Ordinance 40/2011 Promotion of Non-polluting and Energy Efficient Transport Vehicles

221 Partnership Agreement, Romania, 2014R016M8PA001.1.2, p. 201.

CONCLUSIONS AND RECOMMENDATIONS

Both Romania's energy strategies and the EU funds' planning regarding climate change action are closely related to Europe 2020 targets. The strategy for climate change mitigation is in effect mostly EU-led, in the sense that climate mitigation objectives are driven by EU targets and funded by EU funds, and the government does not envision additional or complementary policies to address climate change. Moreover, the national strategies and the EU funds' allocation show an approach that aims at reaching 2020 targets, but without significant structural change and investment in a transition towards a new energy system that would eventually exclude the use of nuclear energy or fossil fuels.

Looking at the EU funds allocation, climate change mitigation is not effectively mainstreamed across operational programmes and Thematic Objectives. With the exception of the OPs that have allocations for directly climate-related objectives, the other OPs barely discuss the topic, and if they do mention climate change, it is either to describe complementarity with other funds or to discuss the application of the horizontal principle of sustainable development. If the previous programming period is any indication, the implementation of the principle of sustainable development in non-specific projects is mostly a formality fulfilled by applicants to obtain an [otherwise very small] number of points in the selection process.

The EU funds allocated for Romania for 2014-2020 contribute to financing the 'business-as-usual scenario' with reaching the 2020 targets, but they do not contribute or aim to contribute to financing greener scenarios, which would actually require mainstreaming of climate actions and measures. That is not to say that EU funds will not impact the energy efficiency overall or investments in energy infrastructure. However, such impact will be rather limited and will not necessarily lead to further transformation of the energy system.

- Bearing in mind the experience with the 2007-2013 EU funds, which Romania had difficulty spending, it is understandable why the authorities are very much concerned to attain as high as possible absorption rates as well as a well-needed effort to improve funds management. However, the previous experience has also been tainted by many examples of projects lacking in quality that spent millions of the allocations without producing the desired results and with no longer-term impact. The spending of the 2014-2020 funds should be much more results-oriented, and the focus should not be absorption rates, but more importantly the quality of implementation, real impact and sustainability.
- Mainstreaming: each EU funded investment should contribute to decreasing GHG emissions, regardless

- of the Thematic Objective or programme.
- The project selection criteria should involve, with infrastructure related projects, energy efficiency measures and emissions monitoring.
 - If the goal is to eventually head towards a 'super-green' scenario, the investments in fossil fuels infrastructure should be stopped.
 - A better coordination between national funding and EU funding in relation to climate change action.

Transport infrastructure

- Throughout the analysis of the roads infrastructure challenge, the general focus is on transport efficiency rather than sustainability. The general purpose of investments in the transport system should not be simply to make the existing networks more effective, but such investments should seek to identify the most sustainable options and prioritise them. For instance, investments in the railway network should aim not only to make the system more efficient and viable from an economic standpoint, but also to position rail and other clean modes as alternatives to an already upward trending road transport system.

Horizontal principles

- Sustainable development as a horizontal principle

is not effectively mainstreamed across the Operational Programmes. While the documents state that EU environmental rules and regulations will be respected, no policy measures are put forward to address climate change mitigation, other than in the programmes with direct allocations to TO4 and TO5.

- The projects to be funded by all OPs should respect the horizontal principles, but in order to make this effective, sustainable development indicators should be included in all implementing guides [i.e., concerning green procurement, use of resources, prioritisation of clean transport, etc.] and be given a significant weight in the project selection process.

Energy

- In the evaluation of projects for biomass energy generation, the relevant authorities should aim to obtain a general perspective concerning the availability and sustainability of the biomass resource, not purely on a project-by-project basis, using a set of comprehensive sustainability criteria.
- Investments in public buildings should include RES, thus creating demand for RES on the market.
- Building insulation investments should aim at sustainability and potentially be able to transit towards RES, setting standards in regard to building insulation projects.