Falling behind the pack?

Romania's lack of ambition in non-ETS sectors may undermine the prospects for reaching the European Green Deal objectives

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Key messages:

- The European Green Deal represents a development strategy aimed at building an EU economy with net-zero greenhouse gas emissions by mid-century. While Romania's national targets are generally in line with EU legislation, it is not clear how the proposed policy measures can be translated in precise estimations of emission reductions. Currently proposed measures may anyway need to be changed in light of the future revision of the EU 2030 emission target and related policies;
- This policy brief argues that Romania's lack of ambitiousness, especially in sectors that are not part of the Emissions Trading System, such as transport, buildings and agriculture, may both undermine the country's ability to reach climate neutrality by 2050 and could put the Romanian economy at a comparative disadvantage compared to early movers. Therefore, the government should significantly and swiftly ramp up its emissions reduction efforts in these sectors;
- The new EU multiannual financial framework and the post-coronavirus recovery instrument, Next Generation EU, muster an impressive financial firepower which, alongside the temporary relaxation of state aid rules at EU level, offer a once-in-a-generation opportunity for setting Romania's economy on a development track that could make it highly competitive in a future decarbonised EU. To ensure this, public spending needs to be grounded in a coherent and rigorous decarbonisation strategy;
- Romania's upcoming long-term strategy could fulfil this role, provided it is developed using science-based modelling tools capable of quantifying the impact that general and sectoral polices may have on reaching the climate objectives. Based on its long-term strategy, Romania will need to develop not only sectoral strategies for transport, buildings and agriculture, but also for the land use and forestry sectors that could become the source of significant carbon sink capacity.

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Introduction

The European Green Deal offers a bold vision for a clean and decarbonised European Union within the next three decades, with ambitious intermediate steps. This implies that, instead of merely being a footnote concern for various sectors, climate change mitigation is becoming the main organisational principle for the EU economy. Energy, transport, industrial and agricultural policies will be shaped according to the necessity to reduce their carbon footprint. This fundamental shift will constitute the new development strategy for the EU economy for the following decades.

The end goal is clear: climate neutrality by 2050. In this light, the European Commission proposed the new European Climate 'Law', aiming to enshrine the target of net-zero greenhouse gas (GHG) emissions by 2050 into legislation. In effect, as of 2050 any remaining GHG emissions in the EU would need to be balanced by carbon sinks. This will require targeted policy action not only for reducing emissions in all sectors of the economy, but also for promoting and increasing sink capacity, as can be achieved though land-use practices such as afforestation, for example.

As explained in the draft Climate Law, the governance method for reaching this target already exists, having been established through the Governance Regulation, part of the Clean Energy for All Europeans Package. Not only should the required national long-term strategies (LTS) pave the way towards climate neutrality, but the proposed regulation also extends the usage of National Energy and Climate Plans (NECPs) until 2050 to become the fundamental governing mechanism of the EU energy and climate transition. The Commission is currently reviewing the final draft NECPs for the 2021-2030 period that have been submitted by member states.

In its NECP, the Romanian Government outlined its energy and climate ambitions, highlighting the actions through which national targets will be achieved. Nonetheless, while Romania's proposed objectives are, by and large, in line with existing EU legislation, the lack of ambitiousness, especially in sectors that are not part of the Emissions Trading System (ETS), such as transport, buildings and agriculture, may undermine the country's ability to reach climate neutrality by 2050 and could put the Romanian economy at a comparative disadvantage compared to early movers.

In order to show how existing trends are insufficient for reaching net-zero GHG emissions by 2050 in Romania, but also to emphasise the importance of using objective evidence-based modelling for the elaboration of national long-term strategies, this policy brief uses the EU Calculator online modelling tool[1] to estimate Romania's potential for emissions reduction according to current and future policies. A set of policy recommendations are also made in the final section of the document.

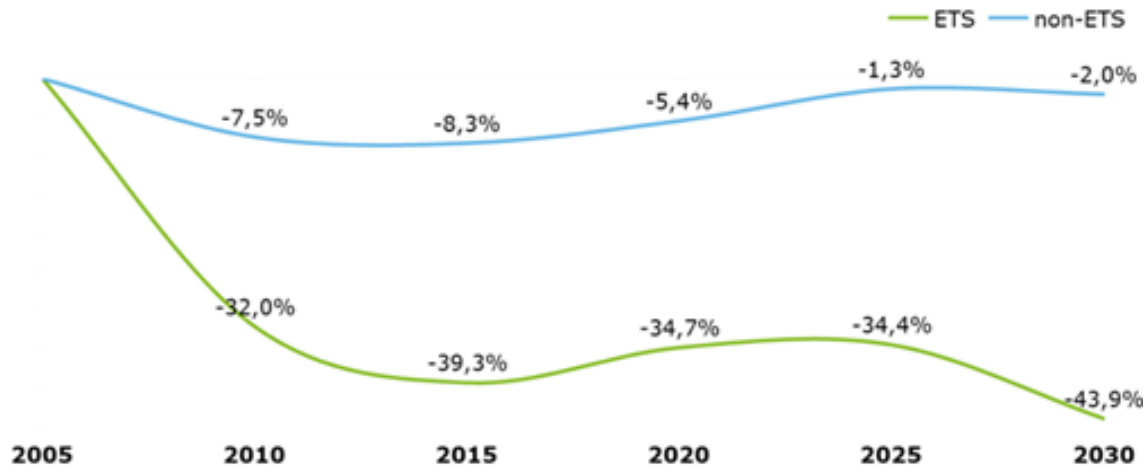
[1] The EUCalc aims at providing a highly accessible, user-friendly, dynamic modelling solution to quantify the sectoral energy demand, greenhouse gas (GHG) trajectories and social implications of lifestyle and energy technology choices in Europe. The modelling approach is rooted between pure complex society-energy systems and integrated impact assessment tools. The EUCalc model with its user interface - the Transition Pathways Explorer – has been designed to be both accurate but also accessible to decision-makers and practitioners. It covers all sectors and can be used by one or many people. The model is also open source so that experts can refine the model itself. See more on the EUCalc project, its scientific reports and all other outputs and access the Transition Pathways Explorer at: www.european-calculator.eu

Romania's targets in the non-ETS sectors

While setting national targets in line with EU legislation, the Romanian NECP does not attempt to rigorously quantify or explain how its proposed measures would translate in concrete GHG emissions, be it in ETS or non-ETS sectors. Nonetheless, the constraints created by the ETS revision which covers the power and industrial sectors, as well as the EU renewable energy and energy efficiency targets, should ensure that Romania meets its 2030 objectives for the sectors under the ETS.

The NECP anticipates a 43.9% reduction of GHG emissions compared to 2005 levels in these sectors. While this level remains unchanged as in the first draft of the NECP released in late 2018, some of the differences in the final version, such as the level of final energy consumption in 2030 or the decreased forecast for coal-fired power generation, will likely decrease even more the final level of emissions than previously calculated.

Figure 1: Historic and projected emissions changes in ETS and non-ETS sectors



Source: Romanian National Energy and Climate Plan (2020)

Meanwhile, emissions in non-ETS sectors are expected to decline by 2% compared to 2005, the same as in the 2018 NECP draft. According to this projection, Romania would indeed meet its obligations under the Effort Sharing Regulation. However, the lack of ambitiousness over the next decade could compromise Romania's chances of being able to meet the long-term 2050 decarbonisation objectives, given the steep timeline and the size of the task at hand. Lacking an EU carbon price signal, as that given by the EUAs in the power, industrial and aviation sectors, member states must develop and implement domestic-level policies for reducing emissions in other sectors.

For sectors not covered by EU ETS, the Effort Sharing Regulation sets binding national targets for the 2021-2030 period in transport, buildings, agriculture, non-ETS industries, and waste. The overall goal is to reduce EU emissions in these sectors by 30% by 2030, compared to the 2005

levels. Each member state has a different national target, based on considerations of 'fairness, cost-effectiveness and environmental integrity'. This means that countries with a lower level of economic development have less burdensome objectives.

Based on these considerations, Romania has a -2% non-ETS target, compared to -40% for Sweden, -38% for Germany, and -37% for France. In fact, compared to the 2019 GHG emissions levels in these sectors, Romania would even be able to slightly increase its non-ETS emission and still meet its target. The fact that Romania can also use LULUCF credit flexibility for covering a significant share of its target reduction of non-ETS emissions means that even less action would be needed for meeting its legal obligations. In reality, though, this could represent a trap, hindering Romania's ability to fulfil the European Green Deal objectives and to purse a future-proof and forward-looking economic development pathway.

The Effort Sharing Regulation in its current form was adopted in May 2018. Since then, the level of ambition regarding long-term emissions reductions in the EU has changed dramatically. In the European Council, all member states with the exception of Poland, but including Romania, agreed to the goal of reaching net-zero GHG emissions in the EU by 2050. The Commission then proposed the framework for the European Green Deal and introduced the Climate Law to enshrine climate neutrality by 2050 into legislation. This law will ensure that 'all sectors play their part'.

Nonetheless, based on current European policies, only a 60% reduction in GHG emissions can be achieved by 2050. Therefore, all climate-related policies will likely be revised to contribute to this new target. This includes the possibility of extending the ETS to other sectors, including buildings and transport, of raising the EU GHG reduction target from 40% to 50% or even 55% by 2030 and of revising the Effort Sharing and land use, land use change and forestry (LULUCF) Regulations. As proof of this commitment, the European Commission has already launched public consultations for the renegotiation of the Renewable Energy Directive and the Energy Efficiency Directive.

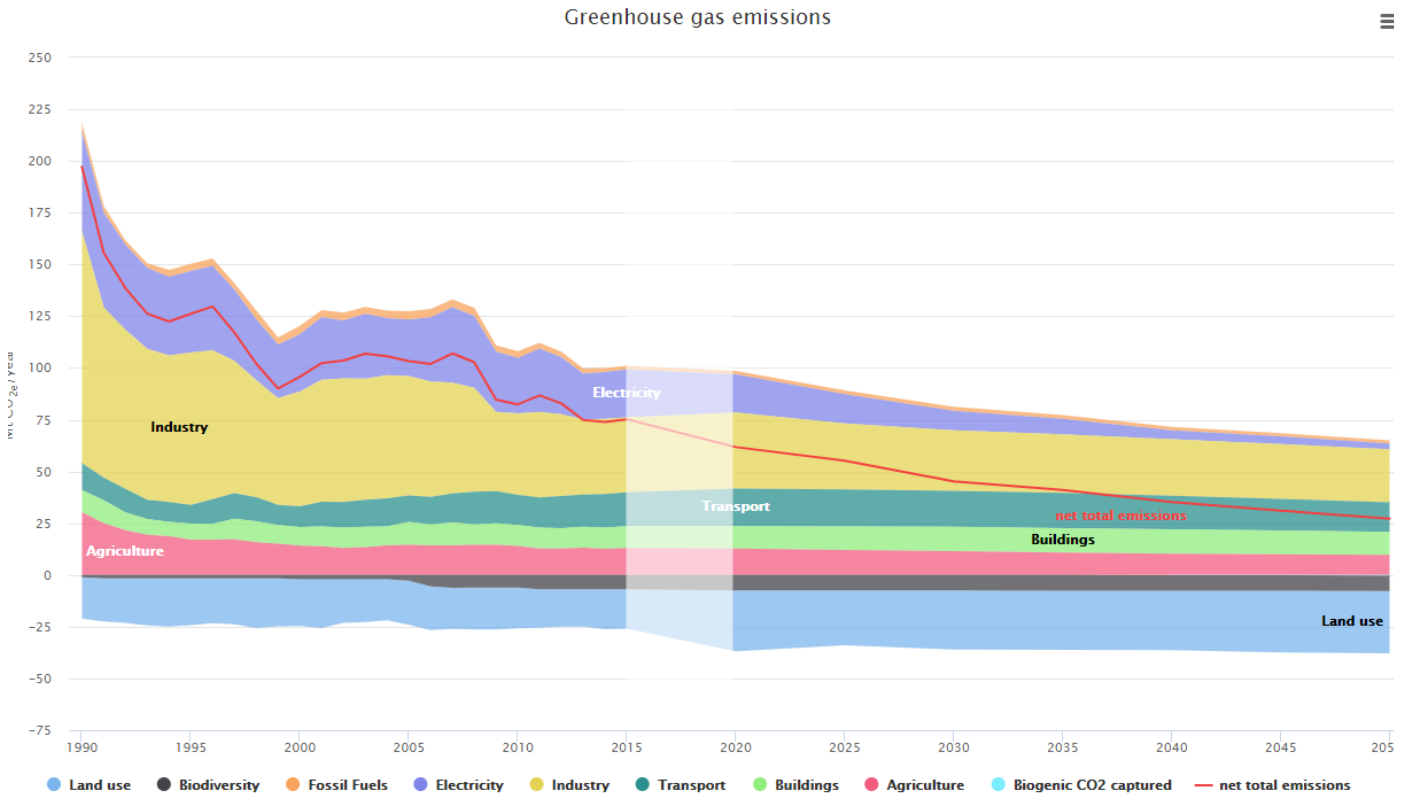
In the face of these upcoming changes, the Romanian strategy shows little ambition regarding the non-ETS sectors, which represents 64% of its total GHG emissions (excluding LULUCF). Not taking early action in transport, buildings[2] and agriculture to keep at pace with the EU's increasing long-term ambitions will turn Romania's post-2030 decarbonisation into an unsurmountable challenge, especially when compared to other EU countries that will have already started to drastically reduce their emissions in all sectors of the economy.

[2] On a more positive note, the Government published on the July 30, an order instating the *Energy Efficient House* programme for single-family homes, which will launch on September 15, 2020. The programme worth €90 million will finance renovations of up to €15,000 per house, which should not represent more than 60% of total costs. Thus, approximately 9,000 houses will undergo renovations to high energy efficiency standards. The Ministry of Environment also launched a public debate on a new programme for energy efficiency in buildings, dedicated to public schools and kindergartens, totalling circa €80 million.

Not on track for meeting 2050 objectives

According to existing policies and past trends, Romania is not on track to achieve a decarbonised economy by 2050. As shown in Figure 2, data modelled using the EUCalc tool shows that in a scenario based on historical actions and behaviours, Romania's GHG emissions (excluding LULUCF) in 2050 would be of at least 55 Mt of carbon dioxide equivalent per year. Even when accounting for a large sink capacity obtained from changes in land use (mainly afforestation), net GHG emission would still be in an excess of 20-30 MtCO2e per year.

Figure 2: GHG emissions in Romania based on existing policies and past trends ($MtCO_2e$/year)



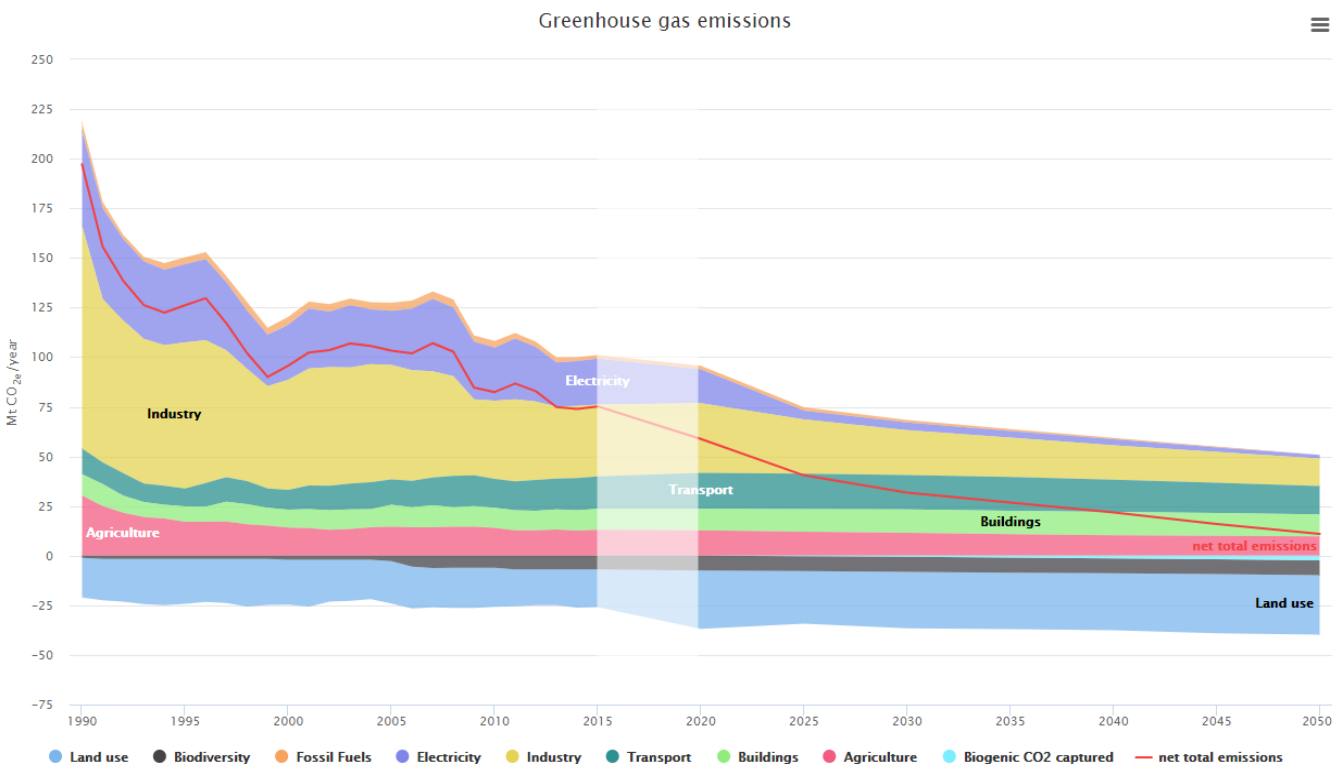
Source: EPG calculations using EUCalc

As previously mentioned, given the existing strong EU-level policies for the decarbonisation of the power and industrial sectors, such as the Emissions Trading System, the Renewable Energy Directive and the Energy Efficiency Directive, related GHG emissions in Romania will decrease significantly. Therefore, an alternative scenario could be devised to reflect a very high level of ambition pursued in those sectors. Figure 3 shows the projections for a scenario based on a swift

coal phase out, a large-scale uptake in renewable energy sources and nuclear capacity, widespread deployment of carbon capture and storage (CCS) technologies, extensive material switch in industry, as well as vast efficiency gains in energy and manufacturing processes.

Without equally ambitious action in the non-ETS sectors, GHG emissions would still be around 14 MtCO2e in transport, 11 MtCO2e in buildings and nearly 10 MtCO2e in agriculture per year in 2050. The model assumes a sizeable 50% increase in carbon sinks related to land use, despite the fact that existing legislation, in the form of the LULUCF Regulation, only dictates that the emissions it covers should remain in balance. Assuming that the increase in sink capacity projected by the model is not realised, net emissions would be in an excess of over 20 MtCO2e. Nonetheless, even if such a sink expansion is achieved, climate neutrality would still not be achieved.

Figure 3: GHG emissions in Romania based on past trends in non-ETS sectors and high ambition in the power and industrial sectors ($MtCO_2e$/year)



Source: EPG calculations using EUCalc

Takeaways and recommendations

This paper highlights two key aspects:

(1) the immediate need for ambitious GHG emissions reduction policies and actions in non-ETS sectors;

(2) the importance of using quantitative modelling tools for understanding the impact that general and sectoral polices have for reaching the climate objectives and for elaborating robust national long-term strategies.

Regarding the first aspect, as non-ETS sectors lack an EU-level carbon price signal, more unilateral action at national level is required for reducing GHG emissions. It is true that part of the emissions from these sectors will be addressed through existing measures, such as the 14.2% RES target for transport and the 33% for heating and cooling. The provisions of the Energy Performance of Buildings Directive and the EU-level CO_2 emission performance standards for new passenger cars and light commercial vehicles will further decrease the carbon footprint of Romania's building and vehicle stocks. The Ecodesign measures similarly will contribute to increasing the efficiency of new boilers, among others. But this will not be sufficient and, in light of the upcoming changes in the EU 2030 objectives, Romania should act in anticipation and put forward concrete and effective policies, backed up by credible financial resources, to lower emissions in transport, buildings and agriculture.

The new multiannual financial framework (MFF) and the novel post-coronavirus recovery instrument, Next Generation EU, muster an impressive financial firepower, representing an unprecedented opportunity for reshaping the economy. While in the form agreed by the European Council only weak climate conditionalities are imposed for how to spend these funds, they should be mainly directed at financing the transition towards a future-oriented and sustainable economy. This includes investments in the decarbonisation of non-ETS sectors, which have thus far been rather neglected in the domestic conversation about climate action.

The temporary relaxation of state aid rules to allow member states to pursue targeted recovery measures may also represent a once-in-a-generation opportunity for setting Romania's economy on a development track that could make it highly competitive in a future decarbonised EU. If Romania manages to achieve emissions lower than those agreed through the Effort Sharing Regulation it could even turn this in a small source of funding, by selling tonnes of overachievement to other member states who struggle to meet their individual targets. Malta has already used this flexibility to purchase credits for meeting its obligations for 2020.

Moreover, Romania should not only develop a comprehensive strategy for reducing its emissions in order to meet the targets, but it should also focus on attracting parts of the future industrial value chains within its borders. This could include batteries, construction materials, fertilisers, hydrogen technologies, and CCS, among others. Ambitious targets for the decarbonisation of industry, transport and agriculture could create certainty for private investors and could contribute to lead market creation for decarbonised products that are (at least partly) made in Romania.

The lack of early action could create a significant competitive disadvantage for the country in the future, as other EU member states are already moving in this direction. The European Battery Alliance and the European Clean Hydrogen Alliance are representative collective efforts for retaining within the EU as much as possible of the value chain of decarbonisation technologies.

Regarding the second aspect highlighted by this paper, climate policymaking and planning in Romania have so far lacked a sufficient level of analytic clarity and rigor. Often, laws, ordinances and regulations are not grounded in coherent strategies and in sufficiently-though-out cost and impact analyses. When confronted with the economic and social reality, such legislative acts can prove inadequate, thus requiring swift revision. This, in turn, translates into frequent changes of the regulatory environment, which affects businesses and discourages investors.

Strategic planning as well, often done to merely fulfil EU requirements, tends to rely more on the subjective and idiosyncratic preferences of the decision-makers, rather than on objective, evidence-based considerations, thus being ideological, prone to conformism, and oblivious to technological and behavioural changes.

The long-term strategy that the Romanian Government is obliged produce as part of the requirements of Governance Regulation represents a key opportunity for overcoming some of these deficiencies. The data presented in this paper highlights the need for science-based modelling of different scenarios in order to show the GHG emissions prospects of both existing and future policies. Such analysis is needed for understanding the potential of each sector to contribute to emission reductions, but also to assess its respective readiness for decarbonisation. Also shown by this paper, balancing of emissions and sinks will be paramount and likewise requires careful quantitative analysis. Based on its long-term strategy, Romania will need to develop not only sectoral strategies for transport, buildings and agriculture, but also for LULUCF sectors, which have a large potential for increasing the national carbon sink capacity, which will be in ever-higher demand in the future.