



**TEN PRIORITY AREAS FOR ROMANIA'S
POST COVID-19 RECOVERY**

A focus on energy and climate policy

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November 2020

Abstract

The post COVID-19 economic recovery represents a unique opportunity for setting Romania on a path of sustainable economic growth and for ensuring its competitiveness in a future decarbonised EU economy. Romania's recovery plans should be designed to maximise the economic impact of the upcoming recovery funding, while simultaneously safeguarding national long-term climate ambitions, by focusing on future-proof investments and a smart regulatory framework, in line with the European Green Deal. The extraordinary circumstances of the newly available EU recovery funding that Romania can spend in following years make it imperative to identify key investment priorities, but, equally important, to also simultaneously pursue legislative, regulatory, and market reforms that can maximise the positive economic impact of the upcoming investments. This paper proposes a list of key issues that need be tackled as part of Romania's post COVID-19 recovery strategy, structured in ten overarching energy and climate-related priorities.

Authors: Mihnea Cătuți, Denisa Diaconu, Andrei Covatariu, Mihai Bălan, Vlad Surdea-Hernea, and Radu Dudău

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Introduction and EU context

The recovery from the economic shock caused by the COVID-19 pandemic creates a unique opportunity for Romania to take decisive action towards meeting both its short- and long-term energy and climate objectives. A green recovery plan should be designed to maximise the economic impact of the upcoming recovery funding, while simultaneously safeguarding Romania's long-term climate action by focusing on future-proof investments and a smart regulatory framework. The policy and investment decisions to be taken in the following months represent a once-in-a-generation opportunity to set Romania on a path to sustainable economic development for decades to come.

Recognising that post-pandemic recovery will require collaboration between the EU member states, as well as a new approach to growth that emphasizes sustainability, European leaders have agreed in July 2020 on a comprehensive financial [package](#) of €1,824 billion, which combines the Multiannual Financial Framework (MFF) and the newly created Next Generation EU (NGEU) recovery instrument. The MFF covers a standard period of seven years between 2021 and 2027, while the NGEU provides the member states of the EU with the financial means to address within the next few years the challenges posed by the COVID-19 pandemic in its aftermath. Expenses under the MFF and NGEU have to comply with the EU's climate neutrality objective, with the 2030 climate targets and the stipulations of the Paris Agreement. In addition, one-third of the financing should directly cover climate-related projects. At the core of the NGEU lies the Recovery and Resilience Facility (RRF), an instrument that will provide EU member states with €672.5 billion of loans and grants in frontloaded financial support for the initial years of the post-COVID 19 recovery.

Around €80 billion of the MFF and the NGEU have been allocated to Romania, either in the form of grants or low interest loans. While Romanian authorities announced their intention of using a large portion of the available funds for investment in infrastructure, the conditionalities attached to the MFF and NGEU, as well as the general EU policy framework indicate that many projects will have to respect the ambitious sustainability standards championed by the EU.

The Romanian government will have to submit its recovery and resilience plan by April 2021, but the European Commission encourages states to submit preliminary drafts by the end of 2020. Following the recommendations of the Commission, the national recovery and resilience plans should include a minimum of 37% of expenditure related to climate action and progress towards other environmental objectives, in line with the European Green Deal (EGD). Moreover, the remaining spending should follow the 'do no harm principle,' as defined in the EU taxonomy for sustainable finance, i.e., investments funded through these instruments should not lead to significant greenhouse gas (GHG) emissions.

This principle is consistent with the EGD, which offers a bold vision for a clean and decarbonised Europe within the next three decades, with ambitious intermediate steps. This implies that, instead of being a mere footnote concern, climate change mitigation becomes the primary organisational principle for the entire EU economy. Energy, transport, industrial and agricultural policies will be shaped according to the necessity to reduce their carbon footprint. This

fundamental shift, alongside a focus on the digital economy, constitutes the new development strategy of the EU economy for the next three decades.

The flagship initiative of the EGD is the new [Climate 'Law'](#) proposed by the European Commission, aiming to enshrine into legislation the target of net-zero GHG emissions by 2050. In effect, as of 2050 any remaining GHG emissions in EU's economy would need to be balanced by carbon sinks. Crucially, the proposed regulation also extends the usage of National Energy and Climate Plans (NECPs) until 2050 as a fundamental governing tool of the EU energy and climate transition. More recently, the Commission published an [impact assessment](#) for raising the 2030 GHG emissions target to 55%. Achieving this will require increased ambitions and revisions of legislative acts, such as the [Emissions Trading Scheme](#) (ETS) Directive, the [Effort Sharing](#) Regulation, the [LULUCF](#) Directive, the [Renewable Energy](#) Directive and the [Energy Efficiency](#) Directive, among others.

The Commission is also currently working on the delegated acts necessary for the implementation of the above-mentioned [EU taxonomy for sustainable finance](#), which will establish a classification for investments that are considered sustainable from a climate perspective. Financing of projects will also be ensured through the [Sustainable Europe Investment Plan](#), proposed by the Commission as the investment pillar of the EGD. The plan is to mobilise €1 trillion of private and public sustainable investment projects over the next decade. This will be accomplished through leveraging €279 billion using the [InvestEU Fund](#), a new [Just Transition Mechanism](#) for ensuring a socially fair transition in carbon-dependent regions, the Innovation and Modernisation Funds, which are part of the EU ETS, and more than half a trillion euros in climate and environmental spending under the MFF. Moreover, the [European Investment Bank](#) (EIB) will turn in the EU's 'climate bank', gradually increasing its share of financing dedicated to climate action and environmental sustainability to 50% by 2025, in addition to eliminating any investments in energy projects that use fossil fuels, including natural gas, as of 2021. Based on these considerations, it is paramount that Romania develops a green recovery strategy focused on future-proof investments and policy measures that can deliver climate neutrality by 2050.

On November 23, a first draft of the [National Recovery and Resilience Plan](#) was released – and then quickly withdrawn, for unclear reasons. Correctly identifying what the strategic priorities of such a plan should be, the first pillar of the plan earmarks 65% of funds for investments in the green transition and climate change. While this represents a step in the right direction, more focus would ideally be given to the transition towards a climate neutral energy system, the decarbonisation of buildings and industry, the implementation of circular economy concepts beyond the waste management sector, and the even further development of railway infrastructure. Currently, significant amounts of the first pillar of the plan are dedicated to road transport, irrigation systems, and climate adaption more generally. Besides, without a set of regulatory and legislative changes, the full economic impact of these investments may not fully materialise. It is thus important that Romania's recovery strategy goes beyond the measures and investment priorities set in the National Recovery and Resilience Plan.¹

Therefore, this paper adopts a more holistic perspective of Romania's post COVID-19 recovery, proposing ten priority areas that should be covered as part of an integrated national strategy for

¹ A more extensive analysis of the Romanian Recovery and Resilience Plan will be provided in a future report of EPG.

a green recovery. While the list is not exhaustive and some issues may be overlapping, it is meant to stimulate discussion on how to best respond to the extraordinary challenge of the post COVID-19 recovery in a way that can set the Romanian economy on a path of sustainable growth and high competitiveness in a future decarbonised EU economy. Recovery plans should equally seek to avoid investments that are not aligned with the objectives of the EGD, investments which could turn into stranded assets, hence a burden on public budgets later on.

The ten priorities underlined in this paper refer to a set of key priority areas, not to specific projects. It is important that recovery and resilience plans go beyond the logic of mere project lists. Given the unpredictability and uncertainty of the timing and shape of the post-COVID-19 economic recovery, it is important that plans have a sufficient degree of flexibility in their design. This means they should identify key areas where investments are most needed and would have the highest return. Moreover, it also needs to be ensured that the newly available money of the Recovery and Resilience Facility is not merely used for funded, pre-existing lists of projects.² Instead, plans should be based on a strategy and governance structure designed to reap the full benefits of a green transition, from ensuring sustainable economic growth, job creation, and development of emerging economic sectors, to creating the conditions for reducing GHG emissions and improving air quality for citizens, among others. This entails not just setting investment objectives, but also timely revisions of legislative and regulatory frameworks for ensuring an appropriate environment for the new investments.

1. Renewable energy sources

The final version of the [Romanian NECP](#) sent to the European Commission envisages a significant deployment of renewable energy capacities of more than 7 GW by 2030, on top of the existing 4.5 GW of wind and solar power, placing Romania as one of the leaders in development of renewable energy sources (RES) in Central and Southeast Europe. According to the NECP, the investments associated with the transformational process of reaching the 2030 climate targets amount to more than €22 billion, making investments in clean energy a key pillar of the green recovery effort.

While the announced plans are ambitious and in line with EU's decarbonisation goals, in order to achieve them, Romania must effectively restart a sector that has seen no investments in new capacities in the past five years, contrary to the accelerated expansion of renewables at global level. Not even the dwindling costs of new wind and photovoltaic (PV) capacities could counterbalance the lack of confidence from potential investors resulting from years of frequent legislative and regulatory framework changes, a conservative approach from the TSO regarding grid connection, and the highest balancing costs in Europe.

Moreover, while the permitting process is not as cumbersome as in other European countries, RES developers have to pay a grid strengthening tariff that can reach up to 10% of the total project cost. In addition, renewables (particularly wind and PV) have generally been based on private

² See also [E3G \(2020\)](#).

investments and have consequently been regarded as competitors for state-controlled companies relying on conventional generation technologies. More recently, positive signals have started to emerge from state-owned companies about their interest to invest in new renewable energy installations.

In light of future projects, some of the main current bottlenecks should be resolved. Among the most notable, due to the concentration of renewable resources (mostly wind) in the South-Eastern part of Romania, grid flexibility represents a serious threat for the development of the planned renewable capacities over the next ten years. Currently, there is also a mismatch between the share of renewables envisaged for 2030 and the TSO's network development plans. While this may indirectly motivate the development of novel flexibility technologies, such as demand side management or utility-scale batteries, this could ultimately hinder the fast development of RES capacities.

To establish RES as a real pillar of Romania's green recovery process, a number of challenges must be addressed:

- **Introducing Power Purchase Agreements (PPAs) in the Romanian legislation.**

As of 1 January 2020, by virtue of the EU Regulation 943/2019 on the internal electricity market, PPAs must be allowed in all EU member states. Only in May did the government issue an Emergency Ordinance (GEO) amending the primary legislation by introducing the possibility of closing PPAs for new capacities built after June 2020. However, shortly thereafter, the Parliament updated the Energy Law without adding any article that would allow PPAs outside the centralised market. Thus, facing this grey area, with EU regulations and the GEO still not transposed in primary legislation, investors have been hesitant with regard to any PPA deal.

Some clarification steps have been made in the secondary legislation, though: an ANRE order in 2019 specified that long-term contracts can be closed outside of the centralised market and another one in 2020 has defined the long-term contracts as longer than a year. Moreover, a new platform on the centralised market (OPCOM) has been introduced as of September 1, 2020, for centralised PPAs.

- **Adopting a framework for contracts for difference (CfDs) for clean energy sources.**

Although the government has been pondering a CfD mechanism for some time, there is still no regulatory framework in place. CfDs, as a means of revenue stabilisation that is critical for overcoming post-COVID uncertainty of demand and electricity prices, are useful as a tool for organising auctions for renewable energy capacities. Together with PPAs, CfDs can constitute the main mechanism for achieving Romania's renewable ambitions, as outlined in the NECP. Moreover, CfDs could unlock Romania's Black Sea offshore wind resources, considering the European Commission's push for the development of this technology. A fund could be created, preferably using EU financial instruments, which can be used as a buffer for CfD deals. The Modernisation Fund, or even the RFF could be used for this purpose, with the goal of providing support to the largest possible number of projects.

- **Prioritising investment in grid reinforcement and expansion.**

In order to increase reliability, adequacy and flexibility, which are paramount to accommodate additional RES capacities, the power grid must be expanded and reinforced. Priority for such investments should be given when deciding, for example, a spending strategy for the Modernisation Fund. Romania should also use wisely instruments such as Projects of Common Interest (PCIs), especially following the upcoming revision of the [TEN-E Regulation](#), as well as the upcoming Recovery and Resilience Fund – part of the NextGen EU financial facility.

- **Reforming the balancing market.**

This measure is acutely needed in an electricity system with a high share of intermittent power production. Currently, the Romanian balancing market is highly concentrated, with some of the highest costs for renewable installations in the EU. In implementing the Clean Energy for All Europeans Package, the national energy regulator, ANRE, should make changes to allow producers, aggregators or consumers to participate in any wholesale market, at any time, in order to foster competition in the sector. The introduction of a single balancing price is also needed to counteract the effects of removing the cap of RON 450 for the price differential between the DAM closing price and the maximum balancing price, as of September 1, 2020.

- **Incentivising utility-scale batteries and Demand Side Management.**

Introducing incentivising regulations for storage in utility-scale batteries and measures facilitating Demand Side Management (DSM) could provide significant additional flexibility and stability to the power grid.³

- **Assessing the opportunities for offshore wind developments.**

As shown in a recently published [study](#) by EPG, Romania has a significant potential of offshore wind resources in the Black Sea. There has been a remarkable increase of interest for the sector in 2020, including at governmental level and from large energy companies. However, there is still little research and data available concerning the wind power potential of its Black Sea offshore, as well as regarding other critical regulatory, planning and design aspects – including spatial planning, grid development, institutional landscape, and market access.

2. Networks, storage, and digitalisation

Investment in major infrastructure has historically been an economic driver. Investment in the Romanian power grid can contribute accommodating an increasingly electrified economy and enable the functioning of liquid and competitive electricity markets. A modernised, expanded, and digitalised energy system will benefit clients and attract interest for new investment projects from stakeholders that rely on a well-functioning electricity grid.

³ An upcoming EPG study will further elaborate on the necessity for development of storage capacities in Romania.

On the power transmission side, there is currently a need to expand the high-voltage lines to accommodate more power generation (especially for renewable energy sources), while on the distribution side, grids are facing challenges related to quality of service and limited geographical reach. Romania's energy networks need massive investment in digitalised solutions and equipment, as well as upgrades, in order to unlock the potential of smart grids and customer centric services.

Other than some timid developments approved by the ANRE – namely the pilot projects for smart-meter deployment by DSOs – progress in this area has been insufficient. Romania needs to accelerate the modernisation of its electricity distribution networks through rapid and extensive digitalisation, building on the country's remarkable performance in the sector of ICT and big data. With ICT accounting for 6% of GDP, the country can use its competitive advantage to become a leader in digital energy services, and even a relevant European player in new energy solutions and business approaches.

Several enabling measures should be adopted:

- **Incentivising long-term investment for transmission and the distribution operators.**

To this effect, it is necessary to introduce new pieces of legislation and regulation, and to facilitate access to financial instruments such as the Modernisation Fund and the Just Transition Fund, as well as, again, the Recovery and Resilience Fund, which ought to be partly spent to bolster the national electricity grid. The latter will be a key conduit and enabler for the entire clean energy transition of the country. Especially when it comes to the Modernisation Fund, grid investments should be one of the main priorities, as such projects can qualify for priority status, hence covering a larger share of the investment costs.

- **Simplifying the procedures for network connection.**

For households, the accessibility and duration of network connection procedures is an important element, on which the adoption of clean and sustainable technologies depends to an important degree. Considering the country's widespread problem of energy poverty, a public program may well include a form of "first household connection" vouchers.

- **Increasing the power grid's adequacy level through integration of storage.**

One important means is investment in utility-scale storage and household-scale batteries. Batteries (including those on electric vehicles, with V2G technology) will unlock the full potential of the prosumer eco-system and generate additional benefits for the Romanian energy system as a whole.

To this purpose, the renovation of buildings, strongly encouraged through the Commission's strategy [A Renovation Wave for Europe](#), launched in October 2020, should not only be massively scaled up, but also pay due attention to the requirements of integrating e-vehicles and energy storage, more generally (including district-level thermal storage). For large-scale battery deployment, targeted support is needed both for grid owners and decentralized small-scale producers.

3. Energy efficiency in buildings

A large majority of Romania's 5.1 million residential buildings were built before 1990, at low energy efficiency standards, with energy performance of 180-400 kWh/m² year. The public buildings have an average yearly consumption of 200-250 kWh/m² year. 2.4 million flats built before 1985 need technical refurbishment and modernisation. One in seven residences has deteriorated floors, walls and windows, often with consequences on the inhabitants' health and well-being.⁴ Such data show the tremendous potential for improving energy efficiency in buildings, responsible for half of Romania's energy consumption.

The Commission's [Renovation Wave](#) strategy was designed to advance the deep renovation of private and public buildings, with massive cuts of energy waste (at least 60%), thereby reducing emissions and boosting economic recovery. At present, the energy renovation rate is under 1% per year on average in the EU, while the deep renovation rate is only 0.2%.

The Renovation Wave aims to at least double the annual energy renovation rate of buildings by 2030 and to foster deep renovations. According to the recommended scenario of the new Romanian [Long-Term Renovation Strategy](#) (LTRS), published in 2019, the renovation rate for 2021-2030 should be 1.88%, followed by 3.74% in 2031-2040 and 4.33% in 2041-2050, in order to achieve the objective of a decarbonised buildings stock by 2050. This would require a significant leap in increasing the renovation rate six-fold compared to 2011-2020.

It should be mentioned that, at EU level, simply doubling the renovation rate will not be enough to deliver significant energy savings, switching to renewable energy sources and reducing GHG emissions at the needed scale. Reaching a 55% emission reduction target by 2030 would require reducing GHG emissions in buildings by 60%, their final energy consumption by 14% and energy consumption for heating and cooling by 18%.

The Renovation Wave intends to encompass all public buildings, and those that offer a service to the public, such as hospitals, schools, and universities. Renovations should aim to bring all buildings to nearly-zero energy standards (nZEB). The strategy implies contracting for many public institutions, with public entities exercising extensive purchasing power in contracts for construction works, the way in which the tender books are formulated in public contracts is important for determining the manner in which buildings are renovated. By 2022, the Commission will look into the possibility to develop green procurement criteria for public buildings related to life cycle and climate resilience.

The Renovation Wave will create more sustainable and resilient buildings, but it can also cause environmental damage if not correctly implemented, as the construction sector is the largest consumer of natural resources and energy. The current regulatory framework for constructions and renovations is not yet designed to address circularity and embodied carbon in buildings. The design, production, operation, and disposal of construction materials have a crucial impact on the performance and carbon footprint of new construction and renovation works. In the built

⁴ See [EPG \(2018\)](#).

environment, the transition towards climate neutrality requires emphasis on systematic thinking to understand the entire life cycle of the buildings and the construction value chain.

Another aim put forward by the Renovation Wave is that building renovations should speed up the integration of renewables in buildings. Indeed, the Commission is considering introducing a requirement for minimum levels of renewables in buildings. RES deployment is essential to decarbonise the heating and cooling systems. Local authorities and utility companies have an important role to play in creating the necessary investment framework and market conditions.

Renovations can generate far-reaching social, health, environmental, and economic benefits. A key objective is making energy efficient buildings widely available, especially for medium and lower-income households and vulnerable consumers. Using buildings renovation as a lever to combat energy poverty is essential for Romania, where energy inefficient buildings are often synonymous with energy poverty and socio-economic problems.

In this respect, Romania should employ its NECP and LTRS to invest in dwellings for people in energy poverty and develop effective approaches for renovating such buildings with priority.

The transition towards a climate-neutral building stock will only be possible if jobs are created to include green and circular skills, and if new job profiles emerge. In this sense, the Renovation Wave offers a unique opportunity to develop specific skills for qualified workers to carry out sustainable building renovation and modernisation. Furthermore, digitalisation and new technologies for energy efficiency in buildings will require a constant upgrade of skills.

Some key measures related to energy efficiency in buildings include:

- **Mainstreaming energy performance contracts and lifting the legal hurdles for ESCOs.**

Energy performance contracts (EPCs) are a valuable instrument for paying back energy efficiency services over time, protecting the end-user from credit or performance risk, especially in conjunction with public stimulus money available for buildings' upgrades. Maximising the impact of public funds relies on the ability to leverage private capital for investment projects that would not be otherwise supported by the market. In this sense, EPCs can play an important role. Beside such legislative adjustments, a public body to manage ESCOs and support the use of standardised EPCs in the residential sector will be especially valuable.

- **Establishing a National Fund for Energy Efficiency.**

In April 2020, the Ministry of Economy, Energy and Business Environment (MEEMA) announced the intention to hire a consultant to lay out the structure and inner workings of such a fund, meant to support energy efficiency programs in all sectors, and also to serve as a counterpart in the financial arrangements of international institutions, such as EIB. However, the process has been stalled since then. The swift elaboration of such a study remains a priority, so that it can be put in public consultation as soon as possible.

- **Decarbonising heating and cooling in buildings.**

The modernisation and decarbonisation of heating and cooling in buildings must be a priority. Refurbishing the country's run-down district heating systems by repairing the heat

distribution networks in the main cities, introducing individual metering, producing heat at high efficiency, and integrating RES in the heating sector ought to be achieved in the short and medium-term.

The government should put in place a national programme to subsidise the installation of heat pumps in buildings. On the longer run, the sources of heat must become completely decarbonised. Apart from renewables, green hydrogen and renewable gases, such as biomethane and synthetic methane, will likely have a significant contribution as heating fuels. Early-stage support for the development of these strategies is needed to overcome the current market barriers and to provide decarbonised, renewable-based solutions for buildings as early as possible.

- **Increasing the renovation rate of public buildings.**

The renovation of public buildings can be a market driver toward wider deployment and scaling up of buildings renovation more broadly. The large portfolio of public buildings in need of renovation will provide examples of best practices, while testing and developing new technologies and financing models.

4. Future of gas

As part of the recovery efforts, significant attention has been given at governmental level and across the Romanian political scene to the expansion of gas distribution networks and the installation of new CCGT units to replace coal-fired capacities and alleviate the country's shortage of power supply. It is crucial that such investments are assessed based on their ability to recover the investment costs before the EU's decarbonisation calendar will make the unabated use of natural gas economically difficult through increased carbon prices. Such projects must be not only financially sound, but it should also be ensured that they do not crowd-out other investment projects that can have a higher impact in terms of GHG emissions reduction. This is a key concern when implementing the EU funds available for Romania, which should prioritise investments in line with the EGD.

While it is true that phasing out coal power plants will be difficult without some degree of switching to new gas-fired units, the risk of overinvestment seems to be significant. While CCGTs could smooth out the replacement of more polluting capacities, in the context of Romania's 2030 renewable energy target and the upcoming upward revision of the EU's renewable ambitions, clean power production capacities are bound to increase considerably in the coming years.

With the potential development of the Black Sea offshore wind resources, as well as other RES, the need for baseload power production will gradually decrease. In fact, modelling results show⁵ that the load factor of new CCGT units in Romania will experience a quick drop in load factor, averaging values of under 40% by 2030. As the power sector will approach climate neutrality, gas-fired power plants will rather be needed as peaking capacities. Moreover, the development of

⁵ See [BNEF \(2020\)](#).

alternative means of storage, such as batteries or pumped hydro, as well as an increased level of interconnection, could also reduce the need for peaking power plants. Therefore, the likely capacity factor at which new CCGTs will operate throughout the coming years needs to be factored in the investment decision.

Similarly, the expansion of the distribution network needs to be assessed against the impact it would have on the decarbonisation efforts of the heating of buildings sector. The period over which such investments would recover their costs must be well understood. There is also a significant risk of creating captive consumers of unabated natural gas, which can be detrimental to Romania's climate ambitions. Any new investments need to also be future proof and capable of accommodating the delivery of decarbonised molecules, such as hydrogen.

Romania should also participate in the European efforts to supply decarbonised gases, which are an essential requirement for the reduction of GHG emissions in difficult-to-decarbonise sectors, such as industry and potentially some parts of the transport and buildings sectors. The European Commission's Hydrogen and Energy Sector Integration strategies show the key role that clean hydrogen will play, especially hydrogen produced from electrolysis using renewable electricity. When envisioning a decarbonisation strategy for the natural gas sector, priority should be given to increasing the capacity for the supply of renewable hydrogen. Moreover, biogas and biomethane can likewise contribute to delivering renewable molecules and for reducing the emissions associated with agricultural and municipal waste. In turn, such molecules could also contribute to the decarbonisation of natural gas use in district heating, for example.

It should also be mentioned that while natural gas could provide short and medium-term solutions for emissions reduction, for instance when replacing coal capacities compared to which it emits half the amount of CO₂, its use also leads to emissions of a more potent greenhouse gas on a shorter time span, namely methane. The Commission has recently published its strategy for reducing methane emissions, both from the energy and agricultural sectors. Methane leakage occurs throughout the value chain, from upstream, mostly in the form of venting and flaring, to the midstream and downstream segments where fugitive emissions are prevalent especially when using old infrastructure. Such leakages must be measured, accounted for, and reduced if natural gas is to provide any 'transitional' solutions for the decarbonisation efforts.

Some key measures are needed for ensuring a timely and orderly transition of the gas sector:

- **Assessing investment in CCGT based on ability to deliver return on investment costs.**

This is necessary not only to avoid the risk of stranded assets, but also to avoid a crowding out effect of alternative investments that can deliver higher GHG emissions reductions. The implications of a higher uptake in renewable capacities should be factored in this analysis, in order to obtain a clear picture of which power plants will be able to produce baseload power (and for how many years) and which will fulfil the role of mere peaking power plants. Such an assessment is also needed for understanding the desirable capacity of any new investment, which should be scaled according to the power plant's ability to recuperate costs. Any investment that runs a high risk of turning into a stranded asset must be avoided.

- **Ensuring that any expansion of the natural gas distribution grid is future proof.**

Similar concerns regard the government's plans to fund a large-scale program for the expansion of the natural gas distribution grid. Public authorities ought to minimise the risks of funding projects that can result in stranded assets. Not only should investment projects be able to recover their capital costs, but it must also be ensured that the expansion of the grid does not hinder the decarbonisation efforts, particularly of the heating of buildings, by creating captive consumers. It is crucial that, if a local grid expansion is deemed economical and if it respects the climate change mitigation *do no harm* principle, the project is designed to be future proof, i.e., capable to accommodate the delivery of hydrogen.

- **Elaborating a strategy for the decarbonisation of the gas industry.**

A national strategy is needed for evaluating Romania's potential demand and production for decarbonised molecules. The main focus should be on large-scale production of green hydrogen, *power-to-X* applications, and biomethane production from agricultural and municipal waste. CCUS applications in the gas dependent industry segments should also be seriously considered. National objectives should be set for each of these categories, while also ensuring that electrification is pursued when deemed more cost-efficient. Planning needs to also consider the options and infrastructure necessities of transporting hydrogen, for which the current gas grid is not suitable. Besides, R&D and demonstration projects must be supported, as well as investment in creating the needed qualified workforce.

- **Detecting, measuring, and reducing methane leakage.**

Methane leakage is an issue that should be tackled across the entire value chain, from upstream to midstream and downstream. As Romania will remain one of the largest producers of natural gas in the EU, it is important that flaring and venting are reduced insofar as it is economically viable. Moreover, leakage detection and repair (LDAR) plans should be implemented to reduce the fugitive emissions of natural gas producers, transport and distribution operators, and large consumers.

5. Just Transition in the coal regions

The hard coal and lignite sectors in Romania will undergo a significant transformation in the coming years, affected by the wider trend of the EU's transition towards a climate neutral economy. Coal phase-out is a cornerstone of the decarbonisation of the power sector. The 55% GHG emissions reduction by 2030 target announced by the European Commission only further enforces this reality. As shown in the Commission's [Impact Assessment](#), reaching this target means that only 17 to 18% of the electricity in the EU will be produced from fossil fuels in 2030. Given the lower GHG emissions of methane, most remaining fossil fuel-burning capacities will likely use natural gas.

The need for a speedy, yet well-organised transition of the sector should not be underestimated. It is increasingly obvious that the country's lignite and hard coal companies will not be able to

survive economically in an EU policy environment that has become drastically more penalizing of carbon-intensive and polluting industrial assets, with EUA prices well above the break-even level of most lignite-fired power plants, and a technology environment in which new RES capacities have become cost-competitive with fossil fuels. In this context, one of the main problems that decision-makers need to solve is how to sustain a coal and lignite phaseout that is as swift as possible while also ensuring security of supply, affordable electricity, and a just transition in the coal-dependent regions.

A clear commitment to a coal phaseout calendar is compulsory for achieving this feat. A total of 21 EU member states are either already coal-free or have committed to a phaseout with specific dates in their NECPs. Only four countries have so far not officially considered a phaseout, with Romania among them. Failure to provide a clear commitment for the coal phaseout and the lack of a rigorous strategy could have devastating consequences for coal-dependent regions and their population. Therefore, the Romanian authorities should fully embrace the concept of a *just transition*.

The endeavour of phasing out coal has two main aspects that have to be resolved. On one hand, there is a need to replace existing capacities to ensure security of supply and system adequacy. The choices of how such investments will be made need to be carefully considered, based on costs, benefits, and risks. Replacing some capacities with natural gas fired CCGTs must be done in a way that avoids future stranded assets and overinvestment, given the incompatibility between the unabated use of natural gas and the EU's long-term emissions targets. Issues of supply of natural gas also need to be considered for such investments, especially as the current trend of domestic gas production already shows a 4-5% yearly decrease. The combination of potentially increased gas price exposure caused by greater reliance on imports and the upward trajectory of EUA prices will likely have a negative impact on the profitability of Romania's planned new CCGT units, with a risk for them becoming stranded assets if such factors are not adequately considered at national level.

On the other hand, the perhaps greater challenge related to a coal phaseout is that of the just transition for people employed in the sector and the impact it would have on local economies. A clear, realistic, and convincing plan is needed for dealing with the direct and indirect loss and de-localisation of jobs, as well as the economic impact at both local and national level. Importantly, the added value of a phaseout strategy should consist in bringing solutions and measures for a just transition, with viable financing options for each issue. Available EU funds, such as the Just Transition Fund (JTF) and the just transition scheme under InvestEU can greatly contribute to targeted investments in coal regions.

Some key measures for a just transition in the coal regions include:

- **Committing to a transparent strategy for coal phaseout.**

While this has largely been avoided by public authorities, a clear commitment is necessary to provide clarity, transparency and foster a substantial national debate on the topic. A coherent phaseout calendar is required for avoiding a disorderly crash of the sector and for allowing sufficient time to build realistic plans for the economic redevelopment of coal regions. Plans for ensuring system adequacy and security of energy supply should be elaborated at the same time.

- **Correlating the phase-out calendar with the new EU MFF.**

The new MFF will mobilise substantial opportunities for funding the energy transition. The spending plans that Romania is required to produce for both the MFF and the RFF provide a unique opportunity for a comprehensive coal phase-out strategy, while ensuring that the financing needs of the transition can be fully covered. Previous modelling work on the coal transition in the Southeast Europe⁶ shows that Romania's coal and lignite fired power plants (PPs) would already run on a negative net profit value by the middle of the decade, which fits well with the suggested timeline for a phaseout. An ambitious plan can ensure that economic losses are minimised.

- **Producing realistic Territorial Just Transition Plans.**

As part of the implementation of the Just Transition Mechanisms, beneficiary member states must elaborate Territorial Just Transition Plans for each of their carbon intensive regions. While this process is already underway, it is important that local authorities, unions, and economic stakeholders are fully involved in this process. The plans must also be synchronised with the national coal phaseout strategy in order to ensure consistency and avoid that any region falls behind.

- **Tapping into the full toolkit of the Just Transition Mechanism.**

While the Just Transition Fund (JTF) is a key instrument for financing the redevelopment of coal regions, Romania needs to also engage fully with Pillar II (Invest EU) and Pillar III (EIB public loan facility) of the mechanism. These pillars offer new ways of financing the transition, particularly by leveraging public and private investments. Besides, public authorities should actively use the Just Transition Platform launched in June 2020, which provides information on funding, updates on regulations and facilitates exchange of best practices.

- **Ensuring that the JTF is mainly focused on managing the social and economic impact.**

While the replacement of power production units is highly important, there are other available mechanisms than the Just Transition Fund through which such investments can be funded, including the Modernisation Fund. The opportunities of the JTF should be dedicated to the greatest extent possible to the foundational purpose of this instrument: ensuring that the transition towards a climate-neutral economy happens in a socially fair way, leaving no one behind. Therefore, most funding should be dedicated for mitigating the impact the social and economic impact that the transition will bear on the population of coal regions.

⁶ See [Szabó, L. et al. \(2020\)](#). These findings are confirmed by [BNEF \(2020\)](#) analysis, showing that even in a less ambitious 50% GHG emissions target for 2030, based on economic performance, no lignite PP will remain operational in Romania after 2026, with the most capacities shutting down before 2023.

6. Industrial transformation

The energy intensive industries, including steelmaking, aluminium, cement, pulp and paper, glass and petrochemical industry, which are heavily dependent on fossil fuels as source a of both energy and feedstock, must decarbonise as part of the EU's collective efforts of reaching climate neutrality by 2050. Industry currently represents approximately 20% of the EU annual carbon emissions. Steel, cement, and chemicals are the highest emitters among the energy intensive industries. While EU industrial producers have reduced emissions by a fifth since 2005, the emissions level has since stabilised after the cheapest and technically easiest interventions have already been implemented, while increases in production have compensated for the energy efficiency interventions.

There are numerous pathways for the decarbonisation of the energy intensive industries. It can be brought forward, for example, through electrification and the use of renewable electricity, the substitution of natural gas with clean hydrogen or biomethane for high heat production, the installation of carbon capture and storage (CCS) technologies where few zero carbon solutions exist (i.e., cement sector) – with carbon utilisation (CCUS) applications wherever there is an economic demand for CO₂ in industry – and the development of novel industrial processes that drastically reduce the carbon footprint. The early movers in R&D and in the implementation of demonstration projects will gain a key competitive advantage as the EU's climate-related regulations will become increasingly more stringent.

The EU ETS already incentivises the adoption of low carbon solutions through carbon pricing and its process of free EUA allocation. The revision of the ETS benchmarks under Phase IV will ensure that the highest compensation is given to the most ambitious companies. Nonetheless, carbon prices and even a potential carbon adjustment mechanism that would penalise carbon-intensive imports are likely insufficient for developing the business case of low and zero carbon industrial technologies in due time. The industrial transition requires support for the development and deployment of new technologies, for ensuring the availability of clean fuel alternatives, such as renewable electricity or clean hydrogen, and for stimulating demand for low carbon products, even if they are produced at higher costs.

Measures of energy efficiency and circular economy are equally important for this endeavour, especially for solutions that will have residual GHG emissions. Many new solutions are emerging due to a progressing (albeit timidly) circular economy that provides opportunities to improve the productivity of materials use in major chains such as construction, transportation, and packaged goods. Implementing economically viable recycling technologies can diminish supply chains while reducing additional demand for raw materials. Innovations in product design and digitalisation to measure and track materials use are major enablers of the industrial transformation. Recirculating steel, plastics, and cement as inputs to new production, instead of making new materials from scratch, can lead to significant emissions reductions within these industries.

Supporting the development of low-carbon industrial solutions can enable Romania to lead the path for decarbonisation in the region. Several measures would be appropriate:

- **Ensuring access to sufficient and affordable clean energy for industry.**

As a prerequisite for industrial decarbonisation, affordable clean energy, both in form of electricity and hydrogen or biomethane, must be available for potential consumers. Supporting investments in such sources of energy supply can enable the decarbonisation of multiple sectors of the Romanian economy, including industry and transport, but they can also grow into exporting sectors to the countries in the region undergoing a similar transition. Public authorities need to develop strategies for attracting EU funding for such projects.

- **Promoting material efficiency and circular business models.**

The implementation of these concepts can reduce the amounts of materials needed to deliver a given product or service and increase their lifespan and utilisation, therefore achieving CO₂ emissions reductions, without having to compromise on economic or societal benefits. Advancing the transition to circular economy within various industries will only be possible through a mix of regulations, policies, and information provided by public authorities (especially given the current relatively limited understanding of the circular economy model at domestic level, where efforts have focused almost exclusively on waste management) and ambitious contributions and investments from the private sector.

- **Engaging fully with the EU's industrial alliances.**

National stakeholders should be encouraged to be actively engaged in initiatives such as the Battery Alliance, the European Clean Hydrogen Alliance, and the European Raw Materials Alliance. These partnerships represent some of the most ambitious initiatives of the EU, aiming to support sectors that will be key in the decarbonisation efforts and to develop technological value chains within the EU. Participation in these alliances can ensure that Romania can expand its know-how and potentially attract parts of the value chain within its borders.

- **Investing in and supporting emerging technologies.**

Projects involving technologies crucial to the transition process, such as batteries, electrolysers, and CCUS, should benefit from the full support of public authorities. This can include increased funding for the R&D stage of development, but also support for the implementation of demonstration projects in Romania through an incentivising regulatory framework, direct engagement with industrial stakeholders, and fiscal stimulus. National authorities should also provide guidance and assistance for companies seeking to access funds through instruments such as the Innovation Fund.

- **Implementing a framework for carbon contracts for difference (CCfD).**

Such an instrument can be designed to bridge the difference between actual carbon prices and the prices that would be needed for the deployment of various low carbon technologies and processes. The European Commission acknowledged in its Impact Assessment that carbon pricing alone will be insufficient for reaching a potentially more ambitious GHG emissions target for 2030.

Functioning in a similar way as contracts for difference in the power sector, CCfDs ensure that the developer of a low or zero carbon investment receives a breakeven carbon price necessary for commercial viability when competing with conventional technologies. An agreed strike-price

stabilises the revenue streams and mitigates risks for investors. Such an instrument could be funded, for example, through the EUA revenues that the government collects, which are currently spent through programmes managed by the Environmental Fund Agency (AFM). Possibly, the CCfD instrument could be hedged through a fund to be designed and implemented by this agency.

7. Prosumers and energy communities

In 2018, after several years of debates about creating a proper and functional regulatory framework, the Parliament issued the first dedicated legislation for prosumers. The energy regulator (ANRE) further established through secondary legislation a net billing methodology for prosumers, among others. Additionally, the Ministry of Environment, through its Environmental Fund Agency implemented a national program subsidising the installation of rooftop PV systems up to 3kW, worth €100 million. However, the implementation phase encountered multiple hurdles (related to the application and evaluation process, which led to significant delays and rendered uneven results. The AFM initiated a similar initiative for SMEs, with a budget up to €150 million, for PV capacities of maximum 27kW, a programme that can increase the adoption rate and could bring significant savings for businesses.

Further incentivising the prosumer ecosystem can contribute substantially to the economic recovery and incentivise the development of new businesses providing goods and services for such customers. Moreover, the installation of solar PVs should be only a first step: similar incentivising legislation and programmes should support storage, energy management, IoT, demand response etc. Additionally, decentralised production should be an important vector for the refurbishment of old irrigation systems as well as for new farms.

Building on the positive steps made so far, additional measures should be taken at regulatory level:

- **Simplifying the current framework for new installations authorization process.**

While significant efforts have been made to reduce bureaucratic burdens for becoming a prosumer, the process is still difficult to navigate. Beside the further simplification of procedures, an active and well-staffed national information point could support potential prosumers in this process. Speeding up the grid connection may also accelerate the adoption rate of these technologies.

- **Widening the scope of incentives for prosumers.**

The rooftop PV programme for households has attracted a high level of interest, showing that consumers are highly interested in such projects. Another programme has been designed recently for small and medium enterprises (SMEs). In order to reap the full benefits that can be provided by prosumers and energy communities, the incentives should be expanded beyond the mere installation of PV panels to small-scale storage, IoT solutions, demand response, and subsidies for V2G – in addition to the already existing subsidy for EVs. Such programmes could be developed

using both EUA revenues, as well as by creating dedicated instruments through the Modernisation Fund.

- **Prioritising support for vulnerable consumers.**

Considering Romania's relatively widespread energy poverty, priority should be given to vulnerable consumers, both for subsidy programmes and dedicated assistance to navigate the process of installing PV panels and becoming a prosumer. Currently, no such prioritising is done in the implementation of national support programmes, even if vulnerable consumers would benefit the most from such subsidies.

- **Exploring the opportunities of off-grid solutions.**

Such an option should be considered for remote communities that still do not have grid access and especially for the agriculture sector. The refurbishment of irrigation systems as well as the development of new micro-farms can significantly benefit from decentralized and clean electricity generation. Assessments should be conducted to understand the conditions under which off-grid solutions are preferable from a cost-efficiency perspective to the expansion of the grid. Both Common Agricultural Policy and EGD funds should be leveraged for such investments.

8. E-mobility and clean transport

The vehicle fleet in Romania is generally old, fuel inefficient and polluting. There are roughly 6 million licensed cars in Romania, with only a marginal proportion of electric and hybrid vehicles. The average age of licensed cars is more than 12 years, one of the highest in Europe. More than three quarters of the new car registrations over the past five years were second-hand cars with internal combustion engines (ICE). This has detrimental effects not only in the form of GHG emissions, but also through local air pollution, which is a public health hazard.

To incentivise the uptake of Battery Electrical Vehicles (BEVs), Romania is offering one of the most generous subsidies of any EU member state, in the form of vouchers worth about €10,000 each for new EV acquisitions. While the measure has undoubtedly produced measurable positive effects and boosted demand for EVs, additional instruments must be introduced for a massive deployment of electric mobility, especially for improving the availability of charging infrastructure. Similar support is also necessary for the decarbonisation of heavy-duty vehicles (HDV), such as trucks, a segment that employs a significant number of people. For HDVs, gas-based technologies, such as compressed natural gas (CNG) and liquified natural gas (LNG), can be a cost-effective decarbonisation solution inasmuch as they make place to increasing volumes of renewable gas and they are used to retrofit the existing fleet.

Freight and passenger transport by train represents a pathway for the decarbonisation of transport. It is paramount that the Romanian authorities prioritise the modernisation, expansion, and electrification of the existing railway infrastructure. Wherever electrification is uneconomical, hydrogen can represent a fuel that can reduce GHG emissions.

The decarbonisation of water transport (by sea and by river) and aviation, while more technically challenging, should be an integral component in any transport decarbonisation strategy. A transition vector for these sectors could be hydrogen – used either directly or converted into ammonia for ships, or as an ingredient for synthetic fuels in aviation. The development of substantive national hydrogen producing capacities could enable the decarbonisation of part of the transport sector, which may in turn represent a lead market for hydrogen demand.

Some of the following measures should be considered for the sector:

- **Introducing clean vehicle mandatory purchasing quotas for public authorities.**

In addition to maintaining the current incentive for individual buyers, attention must be given to public authorities' fleets, which should implement mandatory quotas for battery electric or fuel cell electric vehicles. Since procurements usually come in the form of wholesale replacement or expansions of a public institution's vehicle fleet, prices per unit can be lower than those for retail customers. Thus, public authorities should be early movers in decarbonising their vehicle stock and make full use of EU funding.

- **Expanding the charging infrastructure for EVs and other types of electric vehicles.**

As required by the EU legislation, mandatory quotas for charging stations in public-access parking places and for new buildings must be put in place. To this effect, simplified public tenders/open access procedures for the installation of public charging stations need to be implemented. A significant boost can also be brought by lowering the VAT level for charging services and the ownership tax. Moreover, similar infrastructure should be available for hydrogen.

- **Modernising and developing public and alternative transport in cities.**

In addition to concerns related GHG emissions, urban mobility patterns are also the source of significant air pollution, especially in large cities like Bucharest, Cluj-Napoca, Iași, Timișoara, Constanța, and Craiova. Local authorities should be supported and encouraged to adopt measures such as the large-scale expansion of bicycle lanes, which gained a lot more public traction during the COVID-19 crisis, but also integrated multi-modal urban transport systems, designed to minimise the need for personal car ownership. Such measures should be coupled with policies of increasing the cost of access and parking fossil-fuel based vehicles in the city centres.

Meanwhile, the acquisition of battery electric and fuel cell electric buses ought to grow, as well as the expansion of the network of charging stations. The relatively extensive network of tramway transport in the country's main cities is in urgent need of modernisation. And again, for reasons of functionality (i.e. lack of a sufficiently developed infrastructure to support full electric buses) and cost-effectiveness, CNG-fuelled retrofitted buses can be a useful intermediate step towards decarbonising urban transport, as long as the cities commit to ambitious deadlines for substituting fossil for renewable gas.

- **Increasing the funding for railway investments.**

Railway transport is a key pathway for the decarbonisation of the transport sector, both for passenger and freight transport. Yet, with the exception of some investments in the main TEN-T EU corridors, the Romania railway infrastructure has suffered from a prolonged period of decay

and contraction. Especially when developing the national plans for the MFF and RFF, priority spending should be dedicated to the modernisation, expansion, and electrification of the railway infrastructure. Fuel-switching to hydrogen should also be considered, wherever electrification is not cost-efficient.

9. Energy poverty and vulnerable consumers

Although Romania still has some issues of energy access, with a few tens of thousands of households not yet connected to the electricity grid, the bigger challenge is related to fuel poverty: almost 25% of the population was considered energy poor before the COVID-19 crisis. Indeed, a significant share of the Romanian population faces difficulties in covering the expenses related to energy services and struggles to keep households adequately warm.

The main causes are low incomes, buildings of low energy performance, and other compounding conditions (such as long-time unemployment, health issues, old age, etc.). In Romania, in spite of the comparatively low household prices, energy bills represent one of the highest shares of total average monthly expenditures in the EU. In this context, some consumers resort to electricity theft. Not only is this associated with physical and legal risks, but it can result in further socio-economic marginalisation.

Moreover, the share of vulnerable consumers or customers at risk has likely increased since the outbreak of the pandemic, as an immediate consequence of the lockdown measures. As multiple industries were forced to temporarily halt activity, employees were either laid off or, at the very least, suffered a decrease in their income level.

Measures are also needed in anticipation of the distributional challenges that will emerge from the implementation of the European Green Deal. For example, with the recent revision of the EU [ETS](#) Directive, the reinforcement of the Market Stability Reserve (MSR), the increased pace of reducing the cap on emissions, and the alignment of free allocations with actual production levels are likely to lead to a significantly higher price of carbon across the EU. Historical trends show that, because of inelastic demand for carbon-intensive commodities, a large part of the carbon price increase is eventually borne by final consumers, not by the GHG emitters. In addition, carbon pricing tends to have regressive effects absent corrective social measures, to the effect of heavier financial burdens on low-income people.

The significant levels of energy poverty in Romanian makes it imperative for the government to design a resilient strategy for energy poverty mitigation before the beginning of the new phase of the ETS scheme. The vulnerabilities should be addressed by an improved national system of using the revenues from ETS trading, including investment in energy efficiency, renewable energy sources, digitisation, and job-transition and reskilling programs. Such measures should not only cushion the distributional impacts of the transition towards a carbon-neutral continent but would likely have positive economic effects through the creation of sustainable jobs.

Energy poverty should be addressed through of a mix of financial and non-financial measures, with immediate impact on vulnerable consumers and longer-term effects to tackle the underlying causes of energy poverty:

- **Enshrining a clear definition of the vulnerable consumer into law.**

This represents a legal obligation for Romania, as part of the implementation of the Clean Energy for all Europeans Package. At the same time, an operational definition of *vulnerable consumer* is a prerequisite for gauging the existing number of vulnerable consumers and the impact of targeted policy interventions. A framework for continuous monitoring must also be put in place.

- **Providing immediate financial aid for vulnerable consumers.**

Financial aid needs to be provided to vulnerable consumers, given the likely increase of their number during the pandemic. Such measures should be carefully directed only to those in need, in order to avoid unnecessary price regulation for the entire energy markets. Besides, the regulatory framework should have clear provisions on payment flexibility, thus making available flat monthly fees for any household interested in having fixed-price bills – as opposed to high costs in winter and relatively low costs in the summer – while also being able to serve debts in monthly instalments.

- **Switching old and inefficient appliances in vulnerable households.**

Such changes are a crucial step in supporting those facing fuel poverty. A partnership needs to be established between the Romanian authorities (that can enact subsidies), utility companies (that can support the initiative by invoicing these products in monthly instalments, through the electricity bill), white goods manufacturers (that can sell more energy efficient appliances), retailers (that can participate in the project as direct sellers), and banks (that can support the financing process). Similar actions can be implemented for other products, such as LED bulbs or heating appliances.

- **Prioritising energy efficiency renovations for households inflicted by energy poverty.**

Energy efficiency measures can solve numerous issues faced by the Romanian consumers, while adding value for the economy as a whole. The renovation of apartment buildings can significantly increase living standards, while reducing energy consumption and associated costs. The same applies for digital solutions; thus, monitoring energy consumption is particularly important for those with limited budgets. As mentioned, above, in the public programmes of buildings renovation, priority should be given to vulnerable consumers. Information campaigns are also needed to turn the increased energy performance of buildings into real energy efficiency gains, a component of behavioural change of the dwellers must be ensured through public information, awareness, and education campaigns.

- **Targeting vulnerable consumers directly in the funds financed by EUAs revenues.**

As explained above, the expected adjustments in the EU ETS system can have an uneven impact on vulnerable consumers. Therefore, in order to anticipate some of the distributional challenges of the increasing EUA prices, partly borne by the final consumers, additional support should be directed to those in energy poverty by means of programmes run by the AFM.

10. Administrative capacity

Despite the fact that the Central and Eastern European member states are among the main beneficiaries of the new EU Recovery and Resilience Facility and React-EU, as well as the new MFF, two main risks may reduce the economic impact of these instruments: (1) a traditionally slow absorption rate of structural investment funds in the region; (2) limited administrative capacity to channel large amounts of public investment in projects and programmes.⁷ Therefore, issues of administrative reform and expanding capacity are *sine qua non* for the design and implementation of the post-COVID-19 recovery.

Following recent legislative changes at the EU level, such as the introduction of the NECPs and the national long-term climate strategies (LTS) for 2050, the need for planning and reporting has increased, especially in the energy and climate sectors. Moreover, coherence must be ensured between a plethora of funds, including Next Generation EU, European Social Fund Plus, European Regional Development Fund, Cohesion Fund, Just Transition Fund, European Agricultural Fund for Rural Development, Modernisation Fund, in addition to revenues from the commercialisation of EUAs and investments funded through the national budget or other non-EU sources of financing (as may be the case with the U.S. financial support, Norway funds, etc.).

Coordinating and prioritising investments for each of these sources requires the ability for centralised planning, as well as sectorial capacity for implementation. Currently, responsibilities to implement these funds fall on multiple ministries and agencies, including Economy and Energy, Environment, Finance, European Funds, Local Development, Agriculture, and Transport. In case of some programmes, such as the Recovery and Resilience Facility, timing is also of the essence since funds must be spent within the next few years.

Both the EU institutions and the member states should acknowledge and work towards providing more regionally tailored solutions for the Southeast European member states in this regard. Equipped with less robust public institutions, limited availability of capital, still underdeveloped market economies, and poor infrastructure and public services, the adoption and implementation of highly ambitious climate objectives can be prohibitively difficult in this region.

The neglect of this reality and the lack of compensatory measures could prove detrimental not just to the overall viability of the European Green Deal, but also to the European project itself, risking to cause deep and pervasive divisions between groups of member states. At the same time, countries like Romania must engage more actively and constructively in the European debate about decarbonisation and the transition to net-zero emissions, especially given the multiple legislative revisions that will be made for pursuing the new 2030 and 2050 GHG emissions goals. Such involvement would require a more effective administrative system. Some possible measures could include:

- **Expanding administrative capacity for implementing new EU instruments.**

Such administrative improvement is essential especially in key areas related to the upcoming dialogue with the EU institutions for efficient access to the funds mobilised within the European

⁷ See [Alcidi et al. \(2020\)](#).

Green Deal, as well as through the RFF. Moreover, the capacity to access the finances of the Modernisation Fund and the Just Transition Fund, which will most definitely require dealing with a large number of project applications, requires swift institutional and procedural preparation.

- **Optimising the governmental internal structure.**

Rethinking the structure of some ministries could enhance communication and collaboration with the EU institutions regarding the implementation of both recovery measures and the European Green Deal more broadly. For example, instead of the recent absorption of the former Energy Ministry in the newly minted Ministry of Economy, Energy and Business Environment (MEEMA), it would be more adequate to merge the Energy Ministry with the Ministry of Environment, Waters and Forests (MMAF).

Clarifying institutional roles is also paramount for areas such as energy efficiency, energy efficiency in buildings, and long-term strategic planning. For example, the domain of energy efficiency is currently split among three ministries – MEEMA, for policy planning and implementation on energy efficiency, as well as the management of the upcoming National Fund for Energy Efficiency; the Ministry of Public Works, Development and Administration (MLPDA), for the buildings sector; and MMAF for the energy efficiency support scheme administered through the Environmental Fund Administration. Merging these responsibilities into one single institution could help avoid duplication, diffused responsibility, and unnecessary inefficiency.

- **Expanding the capacities of national financial institutions.**

In the Commission's Sustainable Europe Investment Plan, created to ensure the financing needs of the European Green Deal, a significant share of funding would be covered by private investments and financial institutions. Institutional capacities are needed for implementing the EU taxonomy for sustainable finance, for issuing and trading green bonds, and for accessing funds from investment banks such as the EIB and EBRD. The establishment of a *national promotional bank* could address some of these deficiencies.

List of Abbreviations

AFM	Environmental Fund Agency
ANRE	National Regulatory Agency
BEV	Battery Electric Vehicle
CCfD	Carbon Contract for Difference
CCGT	Combined Cycle Gas Turbine
CCS	Carbon Capture and Storage
CCUS	Carbon Capture, Utilisation and Storage
CEF	Connecting Europe Facility
CfD	Contract for Difference
CNG	Compressed Natural Gas
CO ₂	Carbon Dioxide
DAM	Day-Ahead Market
DSM	Demand Side Management
DSO	Distribution System Operator
EBRD	European Bank for Reconstruction and Development
EGD	European Green Deal
EIB	European Investment Bank
EPC	Energy Performance Contracts
EPG	Energy Policy Group
ESCO	Energy Service Company
EU	European Union
EUA	EU Allowances
ETS	Emissions Trading Scheme
FCEV	Fuel Cell Electric Vehicles
GDP	Gross Domestic Product
GEO	Governmental Emergency Ordinance
GHG	Greenhouse Gas
HDV	Heavy Duty Vehicle
HVDC	High Voltage Direct Current
ICE	Internal Combustion Engine
ICT	Information and Communications Technology

IEA	International Energy Agency
IoT	Internet of Things
JTF	Just Transition Fund
LDAR	Leakage Detection and Repair
LED	Light-emitting Diode
LNG	Liquefied Natural Gas
LULUCF	Land Use, Land Use Change and Forestry
LTRS	Long-Term Renovation Strategy
MEEMA	Ministry of Economy, Energy and Business Environment
MFF	Multi-Annual Financial Framework
MLPDA	Ministry of Public Works, Development and Administration
MMAF	Ministry of Environment, Waters and Forests
NECP	National Energy-Climate Plan
NGEU	Next Generation EU
nZEB	Near-zero energy building
PCI	Project of Common Interest
PP	Power Plant
PPA	Power Purchase Agreement
PV	Photovoltaic
R&D	Research and Development
RES	Renewable Energy Sources
RRF	Recovery and Resilience Facility
SME	Small and Medium Enterprises
TSO	Transport System Operator
V2G	Vehicle-to-Grid

About EPG

The Energy Policy Group (EPG) is a Bucharest-based non-profit, independent think-tank specialising in energy and climate policy, market analytics and energy strategy, grounded in February 2014. EPG's regional focus is Eastern Europe and the Black Sea Basin. Its analyses, though, are informed by wider trends and processes at global and EU levels.

EPG promotes a technologically advanced, secure, environmentally friendly, and socially acceptable energy system. EPG's views are self-standing and science-based. It relies on the best available data sources, as well as on its own research into energy security and strategy, technology, markets, geopolitics and political risk. EPG seeks to facilitate informed dialogue between public decision-makers, energy companies and investors, and the broader public. It looks at energy policies and their effects, at market events and tendencies, and at broader processes with economic, security, and environmental impact, in a consistently evidence-based approach.

EPG partners with national and international institutions (think-tanks, universities, research institutes, associations and foundations) in order to more efficiently participate in the construction of a cooperative, mutually beneficial, resilient, and community-friendly energy system in Eastern Europe and the Black Sea Basin.

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18-24 Fibrei Street
020342 Bucharest, Romania
www.enpg.ro
office@enpg.ro