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RENEWABLE ENERGY DIRECTIVE REVISION IMPACT ON THE ROMANIAN ENERGY SECTOR

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- The current Renewable Energy Directive (RED II) is being amended as part of a broader overhaul of EU climate and energy legislation, to update the target and the legislation for delivering at least a 55% reduction in GHG emissions by 2030.
- The European Commission's RED revision is the key EU legislative instrument for promoting the uptake of renewable energy sources (RES) and lays the foundation for higher RES targets at EU level and in every member state, mainstreaming renewables in buildings, H&C, industry, and transport.
- There are specific challenges that need to be addressed as part of the revision:
  - The increased targets of RES share in the H&C sector for transitioning away from inefficient district heating systems, individual gas boilers and firewood to heat pumps and tightened biomass sustainability criteria are unlikely to be met in the absence of dedicated EU funding.
  - The unrestricted imports of second-hand cars need to be limited for the 2030 targets of carbon intensity reduction in the transport sector to be met in Central and Eastern Europe.
- The RED II revision brings significant opportunities for Romania to overhaul its entire energy system:
  - It will encourage Romania to address its generation capacity deficit and replace outdated fossil power plants with renewables, translating into cheaper electricity, more jobs, economic benefits, and the possibility of developing national value chains for clean energy technologies.
  - It will allow the country to become more ambitious about a wide-scale penetration of renewables in sectors other than electricity.
  - It will encourage the development of Romania's significant offshore wind potential, including the set-up of a cross-border pilot project. Regional cooperation on renewables may open a way for Romania to monetise its above-average RES potential.
  - It will help to create a market for clean hydrogen, allowing Romania to become the key player in the region and develop local value chains based on its significant potential.

RENEWABLE ENERGY DIRECTIVE – BACKGROUND

The Renewable Energy Directive (RED I) – Directive 2009/28/EC on the promotion of the use of renewable energy sources – introduced measures to help the EU reach the 20% RES target by 2020, as part of the 2020 Climate and Energy Package. RED II – Directive (EU) 2018/2001, was a full recast of RED I, reflecting the goals of the 2030 climate and energy framework, including a 32% EU renewable energy target by 2030.

While RED II did not set new binding targets on the Member States (MS), the 2020 targets remained as binding baseline levels, i.e., minimal RES shares that the Member States had to reach.

The European Green Deal has raised significantly the EU's climate ambition, with a view of delivering on its multilateral commitments under the Paris Agreement and putting it on a path towards climate neutrality (net-zero GHG emissions) by 2050. To achieve this, the European Commission communication on a 2030 climate target plan proposed a new intermediate target of 55% GHG emissions reductions by 2030 (up from 40%) compared with 1990 levels.

On 14 July 2021, the Commission adopted a legislative proposal to amend the current Renewable Energy Directive (RED II), as part of a broader overhaul of EU climate and energy legislation referred to as the 'Fit for 55' package. Opting to amend the directive rather than having a full recast is explained by the short period passed from adopting RED II.

WHY REVISE IT?

According to the impact assessment of the package, the new 55% GHG target will require a 38-40% RES share in final energy consumption by 2030. The main purpose of the RED II revision is to update the target and the legislation to deliver this heightened ambition.

The Commission's proposal sets 31 December 2024 as the date by which Member States would have to transpose the revised RED II into national law.

WHAT IS CHANGING?

Some of the most important changes brought to the RED II directive are the following:

- Higher targets for renewable energy:
  - A new EU target of at least 40% RES in the final energy consumption, in line with the EU target of 55% GHG emissions reductions by 2030. New national RES targets for the member states are calculated through a standard formula, though these targets are not legally binding.
  - The support for electricity-only installations based on forest biomass needs to be eliminated by 31 December 2026.
  - To avoid double counting, the renewable electricity used to produce RFNBOs (Renewable Fuels of Non-

Biological Origin) is not included when calculating the RES share in specific sectors and these are accounted for in the sector they are consumed.

- Mainstreaming RES in buildings, H&C (Heating & Cooling), industry and transport through a set of sub-targets and specific measures:
  - An EU target of 49% RES in H&C of buildings by 2030. To achieve this, a binding baseline target is set for an annual increase of 1.1% RES in H&C. Each MS shall endeavour to increase this share by a country-specific additional amount set in the Annexes of the Directive. MS must also perform an assessment of the RES potential in H&C. The indicative RES target from waste heat in district heating is increased from 1% to 2.1% annually. New measures ensure that vulnerable consumers have access to financial support.
  - A binding baseline target for increasing the RES share in industry by 1.1% annually and a binding 50% target for RFNBOs as feedstock or energy carrier.
  - A 13% GHG intensity reduction target in transport by 2030, as well as a 2.6% sub-target for RFNBOs. Additionally, the share of advanced biofuels and biogas in the energy supplied to the transport sector will be at least 0.2% in 2022, 0.5% in 2025 and 2.2% in 2030. Importantly, this can only be achieved with advanced biofuels (produced from lignocellulosic feedstocks such as agricultural and forestry residues, non-food crops such as grasses, miscanthus and algae, or industrial waste and residue streams), since first-generation biofuels are no longer counted in RES targets. A new credit mechanism in the transport sector is aimed at boosting the use of renewable electricity in transport: economic operators that supply renewable power to electric vehicles via public charging stations will receive credits they can sell to fuel suppliers; the credits can be used to meet the fuel supplier obligation. The use of all RFNBOs and recycled carbon fuels will only be counted towards various targets if they come with a GHG emission saving of at least 70%.
  - There are also new land criteria for forest biomass, to avoid sourcing from primary and highly biodiverse forests, peatland, and wetland, as well as an obligation on MS to design support schemes according to the biomass cascading principle, whereby woody biomass is used according to its highest economic and environmental added value. Support for electricity installations using woody biomass also needs to be phased out.
- Promoting renewable energy production:
  - New definitions for RES technologies, including renewable energy hybrid power plants (wind and solar with or without storage, that share the same grid access point).
  - Strengthened provisions to support the uptake of RES power purchasing agreements (PPAs).
  - Member States will issue GOs (Guarantees of Origin) irrespective of whether a project also receives Government support. GOs should be issued for all renewable energy carriers, not just electricity.
  - Member States now have an obligation to implement at least one cross border pilot project within three years.
  - A new obligation for Member States to jointly define and cooperate on the planning of offshore renewables to be deployed in each sea basin by 2050.

Romania has an exceptional natural potential to produce both onshore and offshore renewable energy. In addition, the country is now facing a generation capacity deficit as the old fossil-powered plants are retired, while no new significant renewable capacities have been installed in more than five years. As a result, Romania switched from being a net electricity exporter to a net importer. However, encouraged by EU's decarbonisation policies, as well as the cost advantage of new renewable energy installations,[1] investments are expected to restart. The revision of RED II brings additional policy instruments for accelerating RES development and allowing a wide-scale penetration also in sectors other than electricity. Increased shares of renewable energy in H&C, industry and transport are essential for meeting the 2030 decarbonisation targets.

Given its natural potential, the need for new and cheap power generation capacities and the plethora of available financing instruments, Romania's position during the negotiations on the RED II revision should favour supporting the overall increase in renewable ambition. The 40% EU target translates in at least 38% RES share at national level by 2030. Romania has an excellent starting point for achieving this: the current RES share is around 24%, 20 to 30 GW of new solar and wind projects are already in various stages of development, and the existing hydro power plants provide overall system flexibility. The 30.7% RES target in the current version of the National Energy and Climate Plan (NECP) must be updated, with a revision due by 2023.

By supplementing efforts to remove all barriers to support the uptake of corporate PPAs, the revised directive addresses a key missing instrument that paused the RES development in Romania, while also creating the right conditions for RES penetration in other sectors, particularly in industry. To unlock the full potential of corporate PPAs, the new provisions for GOs are also essential.

The RED II revision also aims to address current permitting issues. Although in Western Europe this represents the major obstacle for developing new projects, the situation in Romania is different, at least for the moment. The average time of 1.5 to 2 years for developing a RES project is among the shortest in Europe, making Romania one of the most attractive European markets for investors. On the other hand, simplified permitting procedures for repowering existing solar and wind installations are relevant for Romania, as most of the currently installed 4.5 GW of RES farms will reach the end of their expected lifetime by 2030. Avoiding any delay in replacing these capacities is critical given Romania's generation deficit.

Although not directly related to permitting, the most important bottleneck in Romania is the grid connection, that still entails significant costs. Besides, the extremely slow pace of grid expansion is insufficient to match the required pace of RES development according to both the current and proposed ambitions. This needs to be urgently addressed nationally, as the RED II revision will reinforce the case for RES-based direct electrification as the primary driver for decarbonisation. Where this will not be technically or economically feasible, renewable fuels could play a vital role, especially for the decarbonisation of the industrial sector. Therefore, Romania should endorse the proposals for binding RFNBO targets in industry and transport, given its potential to produce cheap clean hydrogen, as shown by a recent EPG study.

There are several key challenges relevant for Romania that still need to be addressed during negotiations:

[1]Most models already indicated that the optimum cost-benefit scenario relies on an increased RES target for Romania: Aurora, BNEF, Deloitte.

- The requirement to increase the share of renewable energy in the H&C sector by 2.5% annually can prove particularly challenging. Romania must transition from old and inefficient district heating systems, individual gas boilers and firewood to heat pumps, which, at least for the moment, are still more expensive. Factoring in the energy poverty and the current energy prices, it becomes particularly important for Romania to carefully navigate this switch over the next years and decades, first by developing a national strategy for the H&C sector. In addition, meeting the increased indicative target of renewable energy from waste heat and cold in district heating systems (2.1% per year) will also pose significant challenges at national level. EU support, including funding, should be provided for this target to be met at national level.

- A similar situation exists in transports. Meeting the GHG intensity reduction target by 2030 will be a difficult endeavour, particularly if unrestricted imports of personal vehicles continue to be allowed. More than three quarters of the new car registrations over the past five years were second-hand cars with internal combustion engines (ICE). The RED II proposal risks to exacerbate this problem, as Western European countries are renewing their vehicle fleet and replacing it with battery electric vehicles. As it only applies to new vehicles, the revision of Regulation (EU)2019/631 setting CO_2 emission performance standards for new passenger cars and vans, also part of the Fit for 55 package, faces similar challenges in the region. If this is not addressed at EU-level, Eastern European countries have poor prospects of meeting this target.

- For the heating of buildings, Romania is highly reliant on woody biomass, particularly for individual dwellings in rural areas (around 3 million households). The current practices represent a hazard to Romania's highly biodiverse virgin forests, which are threatened by illegal logging. The tightened biomass sustainability criteria for forest-based biomass and the application of the cascading use of wood principle may be a solution to this environmental hazard, by aligning the national RES ambitions with the EU's biodiversity strategy. Nonetheless, this is expected to have a major social impact on the households that rely on firewood for heating. Most such households already face energy poverty issues. Therefore, this reform must be coupled with a set of measures (including financial) for supporting vulnerable households. Revenues from the current ETS and potentially the new Social Climate Fund can be leveraged for this purpose and should be addressed as part of the negotiations. Even with such targeted support, the timeline could still be prohibitively short. A more holistic approach to decarbonising the heating of rural dwellings could provide a more realistic solution. Firewood for heating would be replaced by heat pumps when the building is retrofitted to increase its energy efficiency. The pace of this switch would then be correlated with the renovation rate established through the Energy Efficiency Directive and the Energy Performance in Buildings Directive, which itself must be accelerated.

If these issues are addressed, the RED II revision could bring significant opportunities for Romania to overhaul its entire energy system:

- A higher RES target will translate into additional power generation capacity that will alleviate the capacity deficit. Moreover, this will mean cheaper electricity, more jobs, more economic benefits, and the possibility of developing national value chains for renewable technologies, as the current global value chains are already under pressure.

- Romania is encouraged to investigate and develop its offshore wind potential, which is significant, as shown by an EPG study. The National Maritime Spatial Planning will have to take into account the offshore energy potential, and Romania and Bulgaria must jointly define and agree to cooperate on the amount of offshore renewable generation to be deployed in the Black Sea basin by 2050, with intermediate steps in 2030 and 2040.

- The obligation to have a cross-border pilot project to foster regional cooperation on renewables opens a pathway for Romania to monetise its above-average RES potential. However, this should be carefully addressed, as such projects would not count towards the national

RES target, but they would still have to be allocated grid resources, which are already strained to the limit in Romania.

- The new targets for RFNBOs can help setting up a market for clean hydrogen in Romania by 2030. Ambitions can be even higher as the country has a very good potential to produce cheap clean hydrogen. This will allow Romania to be the key player in the region and develop local value chains.

The Energy Policy Group (EPG) is a non-profit, independent think-tank based in Bucharest specialising in energy and climate policy, market analytics and energy strategy. EPG's regional focus is Southeast Europe. Its work, though, is informed by wider trends and processes at global and EU levels. EPG is committed to promoting long-term decarbonization policies and actions across all economic domains, with focus on the energy sector. We seek to facilitate objective and informed dialogue between decision-makers and a broad array of stakeholders.