

# Assessment of solid biomass in draft updated Romanian NECP

LIFE BIO-BALANCE



THIS PROJECT  
IS FUNDED BY  
THE EU'S LIFE  
PROGRAMME





*Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.*

<b>Action</b>	<b>C4.8</b>
<b>Deliverable</b>	<b>Assessment of solid biomass in draft updated Romanian NECP</b>
<b>Publicity</b>	<b>public</b>
<b>Date</b>	<b>18/12/2023</b>
<b>Summary</b>	<b>This document provides an assessment of solid biomass sustainability and energy poverty in the draft updated National Energy and Climate Plan of Romania</b>



## 1. Solid biomass sustainability


### 1.1. Compliance with Regulation 2018/1999 (Governance Regulation) and the revised Renewable Energy Directive (2023/2413)

Regulation	Requirements	Explanatory note	Score (green: fully compiled, yellow partially, red: not complied)	Shortcomings (if any)
Governance Reg. Annex I. 2.1.2 iv	Estimated trajectories on bioenergy demand, disaggregated between heat, electricity and transport, and on biomass supply by feedstocks and origin (distinguishing between domestic production and imports). For forest biomass, an assessment of its source	In order to overcome the well-known supply-demand gap in the CEE countries, it is important that the two trajectories should be comparable to each other, i.e. the document using the same unit for the supply-demand balance analysis (i.e. the original volume/weight/area numbers are converted to energy units). The trajectories should be on a yearly basis using the baseline of 2023 or earlier, not only for 2030.		<i>Estimated trajectories on bioenergy demand, disaggregated between heat, electricity, and transport are represented in Figure 19 of the revised NECP, but data on biomass supply is not provided in this document.</i>



<p>RED III Art. 29 (7b)</p>	<p>Assessment of the domestic supply of forest biomass available for energy purposes in 2021-2030 in accordance with the revised sustainability criteria</p>	<p>This new regulation should assess how the RED III criteria affect the planned available forest biomass. It should also be on a yearly basis, using the baseline of 2023 or earlier.</p> <p>As the <a href="#">NECP Guideline</a> states, it should also include measures related to the sust. criteria and measures ensuring the biomass cascading principle.</p>	<p>[REDACTED]</p>	<p>The revised NECP document does not include any assessment of the domestic supply of forest biomass available for energy purposes in accordance with the revised sustainability criteria, nor does it include measures related to these criteria or measures ensuring the biomass cascading principle.</p>
<p>RED III Art. 29 (7b)</p>	<p>Assessment of the compatibility of the projected use of forest biomass for the production of energy with the Member States' targets and budgets for 2026 to 2030 laid down in Article 4 of Regulation (EU) 2018/841</p>	<p>While the Gov. Regulation is only required to assess the impact of bioenergy use on the LULUCF sink, the RED implies that the bioenergy use should not hinder the national LULUCF targets, and it has to be proved by the assessment.</p>	<p>[REDACTED]</p>	<p>The assessment of the compatibility of the projected use of forest biomass for the production of energy target and budget for 2026 to 2030 is missing</p>
<p>RED III Art. 29 (7b)</p>	<p>Description of the national measures and policies</p>	<p>This is critically important, as forestry regulations</p>	<p>[REDACTED]</p>	<p>There is no description of the national measures and policies</p>



	ensuring compatibility with those targets and budgets	generally only regulate forest management in a way to maintain long-term productivity. It has to be based on LULUCF modelling, clearly stating the yearly carbon balances. Also, it should be detailed, including different activities, as it is required also by the <a href="#">NECP Guideline</a> (see box 4). Dedicated PAM should ensure the LULUCF targets.		ensuring compatibility with LULUCF targets and relevant budgets
Governance Reg. Annex I. 3.1.2 vii	Biomass uses by other sectors (agriculture and forest-based sectors); as well as measures for the sustainability of biomass production and use are indicated.	The biomass use by other sectors is important for the trajectory, i.e. there is no overlap between the energy and feedstock demand.		There is no indication of measures that would assure the sustainability of biomass production and use.



## 1.2. Quantitative assessment of the projected solid biomass use

	2020	2030 – original NECP	2030 – updated NECP	% change compared to 2020 and 2030 updated number	% change compared to the original and the updated NECP number	2040	2050
Solid biomass-based electricity capacity (MW)	180	137	NA	NA	NA	NA	NA
Produced biomass-based electricity (ktoe)	161.56	NA	491.88	+204.45%	NA	NA	NA
Solid-biomass based heating and cooling (ktoe)	3,392.76	NA	3,197.22	-5.76%	NA	NA	NA



### 1.3. Policy actions and measures

	Yes (Y)	No (N)	Not relevant (N/A)	Explanation (if needed)
If the production of solid biomass-based electricity is planned to be changed (either decrease or increase), is it backed up by policy actions/measures?	Y			<p>PAM 27 Increase of the domestic generation capacity from Biomass and biogas CHP and PP Main objective: Increase of the domestic generation capacity from Biomass and biogas CHP and PP. Description: Construction of new biomass and biogas CHP and PP. Besides increasing the RES share with these CHPs, they should also contribute to increasing the <b>flexibility of the electricity system</b> and ensuring the security of supply. It is envisioned that waste biomass will be used, taking into account the sustainability of the biomass at a national level.</p> <p>PAM 39 Replacement of conventional fuels with RES in manufacturing industries Main objective: Description: Replacement of fossil fuels (such as coal and oil), reduction of the use of natural gas and their replacement by electricity, hydrogen, energy-rich waste, RES (including biomass), and heat (including heat produced by auto producers and waste heat from thermal processes), in compliance with the rules regarding environmental protection.</p> <p>These measures, mentioned above, lack clear indicators and steps for their implementation.</p>



<p>If the solid biomass use in the heating and cooling sector is planned to be changed (decrease or increase), is it backed up by policy actions/measures?</p>	<p>Y</p>			<p>PAM 27 Increase of the domestic generation capacity from Biomass and biogas CHP and PP •Main objective: Increase of the domestic generation capacity from Biomass and biogas CHP and PP. Description: Construction of new biomass and biogas CHP and PP. Besides increasing the RES share with these CHPs, they should also contribute to increasing the <b>flexibility of the electricity system</b> and ensuring the security of supply. It is envisioned that waste biomass will be used, taking into account the sustainability of biomass at a national level. New biomass CHP – 10 MW each year by 2050.</p> <p>PAM 37 Increased share of heat pumps - It is assumed that inefficient heating devices will be gradually replaced with heat pumps. The share of heat pumps in heat demand in 2050 is 25%.</p> <p>These measures mentioned above lack clear indicators and steps for their implementation.</p>
--	----------	--	--	---

#### 1.4. Qualitative assessment of the projected solid biomass use and supply



The revised NECP lacks crucial elements for evaluating the climate and biodiversity impact of the continued ambition of the planned biomass use as well as whether the planned use is matted in really by the supply on the forestry side, where the plans fail to provide detailed data on feedstocks and the sustainability of feedstocks, in line with article 29. Essential information, assessments, and measures are missing, hindering a comprehensive analysis. Clear indicators and steps for implementing proposed measures are notably absent, including positive measures such as the intended reduction of forest biomass use for household heating, which however asks for the development of an intervention logic for replacing firewood usage with specific energy alternatives.





## 2. Energy poverty


### 2.1. Compliance check

Requirements	Red - not addressed Yellow - partially addressed Green - fully addressed	Justification (why the given colour was chosen)
Energy poverty is defined		Energy Poverty is partially defined as: “The ability of people to secure energy for heating their home reflects the level of energy poverty in the country” The direct correlation between energy poverty and the measures presented with the concept of a vulnerable consumer, particularly the measures in the LAW on establishing social protection measures for the vulnerable energy consumers, is problematic because the concept limits the understanding of energy poverty.
The number of households in energy poverty is assessed		The number of persons is assessed at 15.2% - the indicator “Population unable to keep home adequately warm (have difficulties paying their electricity bills, cannot heat their homes properly or do not have access to



Requirements	<b>Red - not addressed</b> <b>Yellow - partially addressed</b> <b>Green - fully addressed</b>	Justification (why the given colour was chosen)
		<p>affordable sources of energy supply) by poverty status".</p> <p>In LAW No. 226/2021 from September 16, 2021, on establishing social protection measures for the vulnerable energy consumers, an estimate of 500,000 households will receive financial help to pay bills during the cold season.</p> <p>PAM 62 - Development and use of a fully-fledged national social assistance information system - aimed at ensuring automated processing of data on the applicants and verification of the eligibility criteria of vulnerable consumers does not assess the number of households. This measure lacks clear indicators and steps for its implementation.</p>
<p>If a significant number of households are affected, a specific, attainable, measurable and time-bound objective for reducing energy poverty is set up.</p>		<p>Throughout the revised NECP, there is no specific, attainable, measurable, and time-bound objective set for reducing energy poverty. The only mention is the "LAW No. 226/2021 from September 16,</p>



Requirements	Red - not addressed Yellow - partially addressed Green - fully addressed	Justification (why the given colour was chosen)
		2021 on establishing social protection measures for vulnerable energy consumers". The measures that are applied from this law involve a percentage compensation applied to a differentiated reference value, considering both the heating system and the income of the vulnerable person. However, the compensation is directly deducted from the invoice price for heating and electrical energy costs. Unfortunately, this short-term relief approach does not present a realistic specific, attainable, measurable, and time-bound solution to energy poverty.
Existence of measures to reduce and/or alleviate energy poverty through energy efficiency		The only mention of energy efficiency to alleviate energy poverty is within the framework of the "LAW No. 226/2021 from September 16, 2021, on establishing social protection measures for vulnerable energy consumers." However, at this date, there are still no clear implementation guidelines for aid related purchases of energy-efficient equipment, products, or services to enhance the energy performance of buildings or connect to energy sources.



Requirements	<b>Red - not addressed</b> <b>Yellow - partially addressed</b> <b>Green - fully addressed</b>	Justification (why the given colour was chosen)
Existence of measures to safeguard energy access of all groups of consumers, especially the most vulnerable.		Non-financial measures foreseen by this "LAW on establishing social protection measures for vulnerable energy consumers." consist of access and connection facilities to energy sources available necessary to ensure minimum energy needs, including the prohibition of disconnection from energy sources for certain categories of vulnerable consumers, as well as transparent and accessible advice and information towards the population regarding energy sources, costs and access procedures to them.
Underlying analysis is needed to prepare the social climate plans in the updated NECPs to the extent possible. They should explain how they plan to use revenue from the Social Climate Fund (SCF) to achieve the relevant objectives, targets and contributions. (Note: this is not a requirement, but a recommendation by the NECP guideline)		There is no mention of SCF in the updated NECP



## 2.2. Qualitative assessment of the energy poverty-related policies and measures

The NECP partially addresses aspects related to energy poverty, mainly in connection to existing legal provisions from the Vulnerable Consumer Law, but several critical elements are not adequately covered. Specific targets and objectives, clear measures, and a comprehensive definition of energy poverty are lacking. Additionally, the insufficient clarity on the implementation guidelines for energy efficiency measures and their possible contribution to energy poverty efforts contributes to the overall shortcomings.