



RECOMMENDATIONS 1/2024

by the Energy Community Secretariat

**on the integrated Draft National Energy and Climate
Plan of the Republic of Moldova**



Energy Community Secretariat

Recommendations

on the draft integrated National Energy and Climate Plan of the Republic of Moldova covering the period 2025-2030

Whereas:

- (1) Pursuant to Article 9(1) of the [Energy Community Governance Regulation](#)¹ (“Governance Regulation”) each Energy Community Contracting Party (“Contracting Party”) is obliged to prepare and submit to the Energy Community Secretariat (“Secretariat”) a draft integrated national energy and climate plan (“NECP”) covering the period from 2025 to 2030 in accordance with Article 9(1) and with Annex I.
- (2) The draft NECP was submitted by the authorities of the Republic of Moldova (“Moldova”) to the Secretariat on 13 December 2023.
- (3) Pursuant to Article 9 of the Governance Regulation the Secretariat is required to assess the draft NECPs and may issue recommendations until 31 December 2023. The Secretariat made a comprehensive assessment of the draft NECP of Moldova, taking into consideration the relevant elements of the Governance Regulation.
- (4) In particular, the Secretariat’s recommendations may address (i) the level of ambition of objectives and targets with a view to achieving the Energy Union objectives and, in particular, the Energy Community’s 2030 targets for renewable energy and energy efficiency that the Contracting Party aims for in 2030; (ii) policies and measures relating to Contracting Party – and Energy Community-level objectives and other policies and measures of potential cross-border relevance; (iii) any additional policies and measures that might be required in the integrated national energy and climate plans; (iv) interactions between and consistency of existing and planned policies and measures included in the integrated national energy and climate plan within one dimension and among different dimensions of the Energy Union.

¹ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC

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- (5) The Governance Regulation also requires Contracting Parties to provide a general overview of the investment needed to achieve the objectives, targets and contributions set out in the integrated national energy and climate plan, as well as a general assessment on the sources of that investment. The national energy and climate plans should ensure the transparency and predictability of national policies and measures in order to provide investment certainty.
 - (6) The Governance Regulation requires Contracting Parties to take due account of any recommendations from the Secretariat in their final NECP to be submitted until 30 June 2024. If the Contracting Party concerned does not address a recommendation or a substantial part thereof, it shall provide and make public its reasons.
 - (7) Where applicable, Contracting Parties should report the same data in their NECPs and updates in later years as they report to Eurostat or the European Environment Agency. The use of the same source is also essential to calculate the baseline for modelling and projections and to allow for a better comparability of the data and the projections used in the NECPs.
 - (8) All elements of Annex I of the Governance Regulation are to be included in the final NECP. In this context, the macroeconomic and, to the extent feasible, the health, environmental, employment and education, skills and social impacts of the planned policies and measures should be assessed. The public and other stakeholders are to be engaged in the preparation of the final plan.
 - (9) The Secretariat's recommendations to Moldova are based on the assessment of Moldova's draft NECP, which is published by the Secretariat together with the present Recommendation.

THE SECRETARIAT HEREBY PROVIDES THE FOLLOWING RECOMMENDATIONS ON THE DRAFT INTEGRATED ENERGY AND CLIMATE PLAN OF MOLDOVA:

On procedural aspects:

- (1) Carry out an inclusive public consultation on the NECP and consult neighbouring EU Member States and Contracting Parties, ensuring that the participation process occurs simultaneously at all levels of governments and involves the public and the authorities concerned by the implementation of the plan.

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- (2) Enable timely access to relevant information, comprehensive documents, and reports, including the Strategic Environmental Assessment (“SEA”) report, during the consultation process. Allocate sufficient time by extending the consultation period on the draft NECP and the draft SEA Report to ensure meaningful engagement, following the public disclosure of all documents, organise public hearings and transboundary consultations.
 - (3) Take due account of the outcome of the comments, opinions, information, and analyses provided in the consultation process, including the transboundary consultations, and demonstrate this in a transparent and traceable way.
 - (4) Provide a comprehensive description of actions integral to the regional cooperation, in particular in the areas of internal energy market and energy security in the gas and electricity sectors.

On substance:

- (5) Regarding **the general methodology and approach**, improve the clarity and consistency between data and projections referred to in the document and the binding targets adopted by the [decision of the Energy Community Ministerial Council](#)² (“Ministerial Council Decision”).
- (6) Use the headings and terminology of the adapted Governance Regulation applicable to Contracting Parties and make it clear that base of the final NECP is the Governance Regulation and the acts transposing it into Moldova’s national law. Avoid using terminology that is not in line with the Governance Regulation i.e. assigning the label “conditional” and “unconditional” to targets and policies and measures (“PaMs”) in the decarbonisation and energy efficiency dimensions.
- (7) Eliminate the inconsistencies in certain projections and historical data³ including the projections of GHG emissions, primary and final energy consumption in 2030 and the share of renewable energy in electricity generation in 2020.
- (8) Confirm in the final NECP that “national contributions” concerning the achievement of the 2030 targets pursuant to the Ministerial Council Decision are binding national targets.
- (9) Formulate PaMs in more concrete terms, with a detailed description of precise and impactful actions and clear milestones, in particular, in the dimensions addressing the reduction of greenhouse gas (“GHG”) emissions, renewable energy, energy security and the internal energy market. Define precise actions and clear milestones covering also the need to enhance administrative capacities and the need to increase state budget

² Decision 2022/02/MC-EnC on amending Decision 2021/14/MC- EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044, and 2020/1208 in the Energy Community acquis

³ Detailed findings on the inconsistencies are included in Section 6 of the Annex of this Recommendation.

allocations and/or use external financial support to implement PaMs. Consider widening the scope of ministries/public entities responsible for certain PaMs when they would clearly benefit from a whole-of-government approach (e.g. PM_DC6, 9, 10, 11, 12, 15, 16, 17, 23).

- (10) In relation to **decarbonization and GHG emission reduction**, make it clear and explicit how projections on GHG emissions for 2030 under the WPM scenario (8.49 MtCO_{2eq} for both banks in Figure 5, p.69) correspond to Moldova's legally binding target of 9.10 MtCO_{2eq} under the Ministerial Council Decision. Elaborate in more detail the assumptions taken for establishing the anticipated level of carbon sinks and any risks for maintaining that planned level of sequestration capacity until 2030.
- (11) Describe the quantitative contribution of each PaM to the achievement of the 2030 climate target in a more explicit manner, by adding the expected reduction of GHG emissions.
- (12) Include in Chapter 5 of the NECP an assessment of the impacts of the mandatory implementation of the Energy Community [Large Combustion Plants](#)⁴ and [Industrial Emissions Directives](#)⁵, as required by Annex I of the Governance Regulation. Analyse the NECP's interactions with air quality and present the impacts on air pollution for the various scenarios.
- (13) Align the NECP with political or legal commitments made by Moldova in working towards an economy-wide climate neutrality by 2050.
- (14) Consider implementing methane emission reductions, reflecting Moldova's commitment to the Global Methane Pledge, in particular in the gas sector.
- (15) Clarify the planned design and the implementation details of the introduction of an Emissions Trading Scheme ("ETS") and a carbon tax and any complementarities between these PaMs. Consider in the PaM related to ETS taking advantage of regional cooperation within the Energy Community in view of the European Union's [Carbon Border Adjustment Mechanism](#)⁶ ("CBAM"). Align the strategic objectives and timeline of the PaM on ETS with the PaMs related to electricity market coupling.
- (16) Outline in the PaM addressing CBAM what actions Moldova is planning to take to tackle the impact of CBAM.
- (17) Consider adding more PaMs in the industry and wastewater sectors. Provide more details in PM_DC9 on circular economy.
- (18) Add PaMs in the transport sector, covering sub-sectors, travel modes, different vehicle types and service models, fuel and vehicle standards, incentives for private vehicles and

⁴ Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants as adapted and adopted by Ministerial Council Decision 2013/05/MC-EnC, amended by Decision 2015/07/ MC-EnC

⁵ Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC, amended by Decision 2015/06/MC-EnC

⁶ Regulation (EU) 2023/956 on establishing a carbon border adjustment mechanism

public infrastructure, subsidies for the sustainable biofuel market, taxes or disincentives for internal combustion engine vehicles or fossil fuels, and expanded collective transport programmes.

- (19) Clarify the relationship between the objective of boosting removals in PM_DC23 and the expected trajectories of bioenergy and biomass demand, while taking into account the recently adopted Nature Restoration Law in afforestation. Additionally, provide more details on PM_DC25, including on its expected impact on the carbon removal potential.
- (20) In the area of **decarbonisation and renewable energy**, clarify and explain in Chapter 2 of the NECP in a consistent manner how the 2030 target share of energy from renewable sources in gross final energy consumption corresponds to the binding targets under the Ministerial Council Decision.
- (21) Consider more comprehensively the interaction between dimensions, such as how specific PaMs related to renewable energy contribute to energy and GHG savings and to the reduction of energy imports.
- (22) Reconsider the level of ambition concerning renewable energy and/or waste heat and adopt a more ambitious target for the integration of renewable energy in heating and cooling, including district heating to increase the share of renewable energy sources for 1.1 percentage points (ppt) annually in line with Articles 23 and 24 of the [Energy Community Renewable Energy Directive](#)⁷ (“Renewables Directive”) respectively.
- (23) Address the inconsistency throughout the document concerning the integration of renewables in district heating, considering that the related PaM⁸ envisages that district heating systems have to contribute to the increase of renewable energy sources in the heating and cooling sector, while both scenarios envisage natural gas as a primary fuel in district heating systems (Figure 106). Elaborate more on the current state of district heating companies’ achievement of the efficiency standard from the [Energy Community Energy Efficiency Directive](#)⁹ (“Energy Efficiency Directive”) as indicated in PaM PM_DC30.
- (24) Add PaMs that are elaborated in detail, include concrete actions and present a long-term vision for reaching the 2030 renewables target, rather than solely concentrating on elements already outlined in government plans. Explicitly outline the quantitative contribution of each PaM to the achievement of the target distinctly specifying greenfield and repowering projects.
- (25) Introduce a PaM promoting the uptake of renewable power purchase agreements (“PPAs”) in line with Article 15 of the Renewables Directive.

⁷ Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources as adapted and adopted by the Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC

⁸ PM_DC30

⁹ Directive 2012/27/EU on energy efficiency as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC, 2021/14/MC-EnC and 2022/02/MC-EnC

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- (26) Establish an extensive, forward-looking schedule on the allocation of support to renewable energy – including estimated timing and anticipated capacities – over an upcoming period of at least five years in line with Article 6 of the Renewables Directive.
 - (27) In **energy efficiency**, explain in a consistent manner how the 2030 target level of maximum primary energy and final energy consumption in the draft NECP corresponds to the targets binding on Moldova under the Ministerial Council Decision.
 - (28) Update the text of the draft NECP to incorporate the latest legislative developments in Moldova and the increased requirements resulting from the transposition of the Energy Efficiency Directive (such as energy efficiency obligations and annual renovation targets).
 - (29) Provide a more detailed explanation concerning the status, timeframe and scope of the long-term renovation strategy.
 - (30) Introduce PaMs that demonstrate the full implementation of consumption metering and billing of district heat in line with the Energy Efficiency Directive.
 - (31) Add concrete PaMs underpinning the implementation and achievement of the Article 7 target on energy savings obligation. Provide the information required by Annex III of the Governance Regulation.
 - (32) Finalise the adoption of the comprehensive assessment of the potential for efficient heating and cooling and reflect the findings in the NECP.
 - (33) Clarify what investments are included in the PaM concerning the measures for improving energy efficiency in natural gas infrastructure.
 - (34) Concerning **energy security**, strengthen the interlinkage with the other dimensions, particularly the internal energy market, demonstrating how improved market conditions can contribute to a higher level of energy security.
 - (35) Add a PaM dedicated to increasing the level of cybersecurity and resilience also reflecting the plans regarding the establishment, organization and functioning of the Coordinating Council in the field of cybersecurity.
 - (36) Elaborate in more detail in the relevant PaMs, the concrete actions through which the objective of energy mix diversification is planned to be achieved and how the construction of new generation capacities will be facilitated and incentivised in order to ensure energy security.
 - (37) Design and include in the NECP PaMs focusing on regulatory and market-based actions that catalyse the increase of the flexibility of the electricity system of Moldova.
 - (38) Add PaMs in the NECP that address diversification and regional integration in the gas sector via *inter alia* establishing cooperation with the neighbouring markets, flexibility, resilience of the system and implementation of the regulatory framework on existing infrastructure.

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- (39) Define the investment needs for the PaMs related to gas security of supply and add a PaM considering the assessment of the potential role of renewable gases, such as biogas and biomethane in ensuring Moldova's security of gas supply.
 - (40) Regarding the **internal energy market**, add PaMs indicating how Moldova is planning to implement the [Electricity Integration Package](#)¹⁰. In particular, define PaMs targeted at establishing competitive and well-functioning wholesale and retail electricity markets and at operationalising market coupling with the EU without delay.
 - (41) Elaborate in details PaMs addressing the establishment and further development of short-term and balancing markets, also increasing flexibility, necessary to cope with an increased level of renewables.
 - (42) Prioritize a more efficient use of already existing infrastructure and include measures to increase available cross-zonal capacity for existing interconnectors up to the legally binding 70% target as stipulated in [Regulation on the internal market for electricity](#)¹¹ ("Electricity Regulation"). Include in the PaMs increased regional and European cooperation, especially for the exchange of balancing resources and market coupling.
 - (43) Define a relevant and realistic timeline for each individual PaM in this dimension, reflecting the expected target date of completion instead of indicating the same period for all (2023-2030). Align the deadlines with the legal obligations for PaMs addressing the liberalization and increased competition of wholesale and retail markets according to the Electricity Integration Package.
 - (44) Set a national target for reducing the number of energy-poor households within a given timeframe and introduce a methodology for assessing the number of energy-poor households.
 - (45) Include in the description of the current policy situation the main elements of the Joint Moldova – Energy Community and European Commission Roadmap in particular concerning further gas market liberalization and introduce PaMs to implement the provisions of that Roadmap. Update the obsolete information in section 2.4.2 Energy Transmission Infrastructure regarding gas.

¹⁰ Decision 2022/03/MC-EnC on the incorporation of Regulation (EU) 2019/942, Regulation (EU) 2019/943, Regulation (EU) 2015/1222, Regulation (EU) 2016/1719, Regulation (EU) 2017/2195, Regulation (EU) 2017/2196, Regulation (EU) 2017/1485 in the Energy Community acquis, amending Annex I of the Energy Community Treaty and on the amendments of the Ministerial Council Decisions No 2021/13/MC-EnC and No 2011/02/MC-EnC

¹¹ Regulation (EU) 2019/943 on the internal market for electricity as adapted and adopted by Ministerial Council Decision 2022/03/MC-EnC

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- (46) Provide more information regarding the operational, commercial details and legal background of electricity exports from MGRES to Bulgaria as indicated on page 54.
- (47) In the area of **research, innovation and competitiveness**, set measurable targets such as inclusion of research, innovation and competitiveness in the state budget. Include industry-related PaMs in this dimension.

Vienna, 2 April 2024



Artur Lorkowski
Director



Dirk Buschle
Deputy Director/Legal Counsel

ANNEX

To the Energy Community Secretariat

Recommendations




on the draft integrated National Energy and Climate Plan of Moldova

covering the period 2025-2030

Detailed assessment of the draft integrated National Energy and Climate Plan of Moldova

1. Summary

1.1. Overview of the key objectives and targets

Target/objective		Energy Community 2030 target for Moldova	Value in the draft NECP of Moldova
	GHG emissions reduction of total emissions in the policy scenario compared to 1990 levels	- 68.6% (9.10 MtCO _{2eq} of total emissions) compared to 1990 levels	- 68.6% (9.10 MtCO _{2eq} of total emissions) compared to 1990 levels ¹²
	Share of renewable energy in gross final energy consumption	27.0%	27.0% (WAM scenario foresees reaching 31.4% ¹³)
	Energy efficiency	Primary energy consumption: 3.00 Mtoe	Primary energy consumption: 3.00 Mtoe ¹⁴
		Final energy consumption: 2.80 Mtoe	Final energy consumption: 2.80 Mtoe

¹² The Energy Community 2030 target is listed among the various targets including those set out in its 2020 NDC without indicating which target Moldova is pursuing. The territorial application of the target is unclear which has a negative spillover effect in analysing the draft NECP as a whole.

¹³ The territorial application of the target is unclear.

¹⁴ Due to the inconsistencies – i.e. varying values throughout the draft NECP – it is not possible to determine the target values for primary and final energy consumption. The territorial application of the target is also unclear.

1.2. Main observations

- (1) There was **no SEA report submitted together with the draft NECP** to the Secretariat on 13 December 2024. The SEA Report was submitted to the Secretariat following a request on 15 February 2024.
- (2) The **draft NECP was published for public consultation**¹⁵ on 5 February 2024 with the planned deadline for contributions until 19 February 2024. A separate consultation process is organised within the SEA procedure.
- (3) In the draft NECP, there is no detailed overview of how consultations in the inter-ministerial working group, in the stakeholder groups and in general with the public were carried out, what input was received, from which stakeholders, and how those were taken into account in the NECP.
- (4) The draft NECP does not describe any foreseen consultations on the Plan with neighbouring countries.
- (5) Regarding targets and objectives, the draft NECP refers to “**national contribution**” of achieving the 2030 targets, even though these are defined and legally binding on national level for each Contracting Party in the Ministerial Council Decision.
- (6) It is not clear from the draft Plan whether the **adapted Governance Regulation** was used as the basis for its development. The use of EU terminology in the draft NECP and the reference to the Energy Community Ministerial Council’s Recommendations and the Secretariat’s Policy Guidelines on the development of National Energy and Climate Plans under Recommendation 2018/01/MC-EnC – PG 03/2018 does not reflect that the Governance Regulation imposes legal obligations that should be followed.
- (7) Concerning the formulation of **GHG emission reduction targets and objectives**, the policy scenario outlines some of those as “conditional” using the policy formulations in the Paris Agreement. The Governance Regulation, as well as the Renewables and Energy Efficiency Directives, do not distinguish between “conditional” and “unconditional” targets, therefore such a formulation introduces uncertainty concerning the actual level of commitment. In Chapter 2 of the draft NECP several GHG emissions reduction targets (NDC, Energy Community) are listed together without indicating which of them is considered the legally binding target that Moldova is going to follow by 2030. Furthermore, the - 68.6% target is indicated in Chapter 2, as a target for Moldova. In Chapter 1 (pages 29 and 33) however, it is indicated as a reduction target for the Right Bank of the Dniester River only.

¹⁵ <https://particip.gov.md/ro/document/stages/planul-national-integrat-privind-energia-si-clima-pniec-al-republicii-moldova-pentru-perioada-2025-2030/11984> - Last accessed 16 February 2024

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- (8) The **anticipated GHG emissions reduction from LULUCF** appears very ambitious, considering that it assumes a high removal rate – by 2030 cca. 18¹⁶ tCO₂ per ha – to be yielded from mostly newly established forests (110 thousand ha) within the first 6 years of their lifetime.
- (9) **PaMs related to GHG emissions reduction** overwhelmingly focus on the description of legal acts, strategies and other policy documents, and it is not clear what measures Moldova is planning to take to implement them. The PaMs in the forestry sector represent a good example by listing concrete measures.
- (10) There is no assessment in the draft NECP of the impacts of the implementation of the **Large Combustion Plants and Industrial Emissions Directives**. The link to those Directives is also missing from PaM PM_EE22 (Promoting/modernizing highly efficient CHP units).
- (11) **No climate neutrality is foreseen by 2050 for the entire territory of Moldova**, even in the policy scenario. By adding the projected emissions in the WPM scenario including LULUCF in 2050 on both banks of the Dniester River, the overall emissions are still expected to amount to 5,231 ktCO_{2eq}. However, there is an indication that additional measures should be identified to reach the climate neutrality goal.
- (12) The introduction of a **carbon tax** is mentioned in one of the PaMs as intermediate tool and an important option for Moldova to consider for reducing the near-term impacts of CBAM. No additional information is provided on the planned next steps for examining and deciding on the tax as a policy tool and it is not clear how such a transitory solution would be aligned with the anticipated introduction of an **ETS**, which is outlined in another PaM. Both PaMs appear to span over the same time period (2024-2030). There is no link between the PaMs related to carbon pricing and the measures related electricity market coupling, even though the latter is a pre-condition for pursuing an exemption from **CBAM** in electricity.
- (13) The PaM related to CBAM describes the main elements of that EU Regulation, however it sheds no light on how this relates to Moldova and what is meant to be done under this PaM.
- (14) GHG emissions in the **transport sector** are projected to significantly reduce starting soon after 2030, stemming from a reduction in petrol and diesel demand. PaMs and the information in the descriptive part of the draft NECP however do not provide any explanation or ground for such an expected change.
- (15) It is not clear from the draft NECP whether the referred **renewables target** – which includes both the 27% set out in the Ministerial Council Decision and the 31.4% set out in the draft NECP – is applicable to the whole territory of Moldova or only to the Right Bank. In Chapter 2 (page 72), it is stated that Moldova's objective is to increase the share of renewables in gross final energy consumption to 31.4%. However, in Chapter 4.2 (page 225) it is mentioned that the 27% target is committed only for the Right bank of the Dniester

¹⁶ Depending on the assumption of afforestation on 145 thousand ha (Table 3 and PaM PM_DC23).

- River. It is also not clear how the renewables target was calculated, concerning the inconsistency in the figures on final energy consumption and projections for the expected installed capacity in wind and solar PV.
- (16) The integration of **renewable energy in district heating** is not as ambitious as required by Article 24 of the Renewables Directive and could be further enhanced by setting the goal of increasing renewable energy by 1.1 percentage point annually achieving 52.8% share of renewables in district heating by 2030. The draft NECP envisions reaching only 42.7% by 2030.
 - (17) The draft NECP explicitly states that “The **main type of fuel for district heating** in both scenarios (and the only fuel in the WEM Scenario as of 2045) is **natural gas**.”¹⁷ The table in “Annex 2. Energy Forecast 2050” underpins this showing that the share of renewables in the total fuels for district heating plants is marginal in 2030 in the WEM scenario. Given that there is no substantial difference in the structure of installed capacities in the two scenarios for district heating, the **share of heat produced from renewables is expected to remain limited** in the policy scenario as well. This contrasts with the aim of PaM PM_DC30, which focuses at “Fostering deployment of RES in district heating”.
 - (18) The draft NECP and particularly the section on PaMs contains references to the **renewables law of 2016** without making it clear that it also includes the amendments made in 2023. Additionally, there are frequent mentions of the outdated Renewable Energy Directive (2009/28/EC), instead of the new one, Directive (EU) 2018/2001.
 - (19) In the PaMs section, there is a **reliance on existing government plans**, such as the increase of renewable energy capacities, rather than focusing on the capacities required to achieve the target outlined in the draft NECP (for example PaMs PM_DC27 and PM_DC28). From the description of the PaMs it is not possible to assess how they contribute to reaching the 2030 renewables target.
 - (20) There is no PaM promoting the uptake of **renewable PPAs**, which is contrary to Article 15 of the Renewables Directive and there is no extensive, **forward-looking schedule** that foresees the allocation of support over an upcoming period of at least five years, which fails to implement Article 6 of the Renewables Directive.
 - (21) Section 2.2 of the draft NECP lists the **energy efficiency targets** in line with the Ministerial Council decision¹⁸ as the aim for 2030 without indicating any territorial applicability and thus suggesting that it covers the entire territory of Moldova. The values in Table 1 – which show the projections for the Right Bank only – however appear very similar as the overall targets. This leads to uncertainty whether the entire territory of Moldova is considered in complying with the energy efficiency targets in 2030. There are further inconsistencies among the figures even in the same scenarios (both in WEM and in WPM).

¹⁷ The Integrated National Energy and Climate Plan (draft) December 2023, (p. 291) Chapter 5.1.i

¹⁸ Maximum level of 3 Mtoe of primary energy consumption and 2.8 Mtoe of final energy consumption in 2030.

- (22) The draft NECP recognizes a high potential for energy efficiency and lists measures in sectors with high potential for implementation (particularly end-use sectors like buildings and transport). However, the text of the draft NECP **fails to incorporate the latest developments and increased requirements** (for instance from the amended Energy Efficiency Law and the law transposing the [Energy Performance of Buildings Directive](#)¹⁹ adopted in 2023)²⁰.
- (23) While the **Article 7 target** of the Energy Efficiency Directive is calculated, and its achievement split between the implementation of an **Energy Efficiency Obligation scheme** and **alternative measures**, the detailed description of concrete PaMs underpinning the implementation and the achievement of requirements of Article 7 is missing.
- (24) PaM PM_EE25 Promotion of measures for improving energy efficiency in natural gas infrastructure includes implementation costs of EUR 522 mln, which appears excessive compared to the actions provided in the description.
- (25) The draft NECP defines ten PaMs related to the energy security dimension, half of which are related to the electricity sector. **For the benefit of energy security in Moldova, the ongoing process of developing electricity markets is essential.** The integration of these markets to the larger regional and the pan-European market is partially addressed by two PaMs²¹ in the Internal Energy Market dimension and it is outlined in the descriptive part of the draft plan, however it is not clearly defined in the PaMs addressing energy security. The same conclusion is also valid regarding PM_IEM3 (Modernization of existing networks) since the Moldovan transmission system needs to be refurbished and modernised, and this PaM would also need to be referenced in the energy security dimension.
- (26) **Cybersecurity** aspects are marginally mentioned even though this is a significant aspect of energy security. Moldova is making progress with cybersecurity activities and thus a dedicated PaM could highlight the main actions planned in this regard. The establishment of the Cyber Security Agency, the draft Government decision regarding the establishment, organization and functioning of the Coordinating Council in the field of cyber security would also be worth elaborating²².

¹⁹ Directive 2010/31/EU on the energy performance of buildings as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC amending Decision 2009/05/MC-EnC

²⁰ https://www.legis.md/cautare/getResults?doc_id=137208&lang=ro; https://www.parlament.md/ProcesulLegislativ/Proiectedeactenormative/tabid/61/LegislativId/6581/languag_e/ro-RO/Default.aspx - Last accessed 16 February 2024

²¹ PM_IEM8 and PM_IEM9

²² <https://particip.gov.md/ro/document/stages/anunt-privind-consultarea-publica-a-proiectului-hotararii-guvernului-cu-privire-la-instituirea-organizarea-si-functionarea-consiliului-coordonator-in-domeniul-securitatii-cibernetice/11871> - Last accessed 14 February 2024

- (27) **Energy mix diversification** is critical for the energy security dimension but the related PaM²³ is described without indicating specific actions on how to achieve this goal (such as market development, regulatory actions to attract investors, permitting procedures, area occupation plans, grid connection issues). The descriptive part of the draft NECP refers to the energy sector strategy and the list of new planned generation facilities, although it is not clear if these new production facilities are foreseen as a result of market conditions and decisions – where different investors may find their economic interest to start an investment – or they are determined by the Government (the latter option being against the market principles).
- (28) The draft plan defines **modest goals for wind and solar power plant** construction (105 MW and 255 MW until 2030, respectively indicated on page 88, which does not correspond to the projections in Table 1, Tables 13 and 14 and the tables on pages 288 and 289), although there appears to be significant market interest for new capacities according to the statement in the draft Plan on page 55: “At present, there are grid connection applications which altogether are approximately 1,400 MW of capacity. However, the Government plans indicate that the target of total renewables energy supply is 410 MW of installed capacity in 2025.”. Since the increase of the share of domestically produced electricity is vital for energy security, it is important to be elaborated in detail, defining how the construction of new generation capacities will be facilitated and defining clear progress indicators.
- (29) There is no PaM in the energy security dimension addressing the need to increase the currently low **level of flexibility of Moldova’s electricity system** (no load and frequency reserves are available). It is crucial that it is elaborated in a PaM in details how this issue will be addressed and resolved in the future (balancing market development and integration with the neighbouring markets, demand side response, dynamic tariffs, new flexible generation resources, storages, sharing of reserves and balancing energy etc.).
- (30) The **Ten-Year Network Development Plan** (“TYNDP”) prepared by Moldelectrica in 2017, comprising time period 2018-2027 is often referenced in the draft NECP. This TYNDP would need to be updated since the basic circumstances defining necessary transmission network development have been significantly changed since its adoption.
- (31) Whilst the energy security objectives in the **gas sector** duly account for diversification and regional integration, other priorities such as verifying the cooperation with the neighbours, flexibility, resilience of the system and implementation of the regulatory framework on existing infrastructure would deserve recognition as well.
- (32) The required investment and progress indicators for gas related PaMs are not properly defined. An update of the reference year/data is highly recommended as the gas market and its security of supply made significant progress in the last years (2021-2023).

²³ PM_ES10

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- (33) The role of **renewable gases** is marginally taken into account in the consideration of the diversification of gas sources (only via a single figure in planned CHP capacity) even though biogas-related projects and targets appear in the PaMs in the decarbonisation and energy efficiency dimensions. **Biogas and biomethane** could play a significant role in Moldova.
- (34) When addressing the **internal energy market dimension**, the draft NECP falls short of elaborating through which concrete actions and on which timeline the main requirements of the **Electricity Integration Package** are planned to be fulfilled. The presented PaMs remain on a general level, without concrete details and milestones such as the year for the planned phase out of regulated prices, the exact steps to be taken (not just by the government but also by market participants) in order to participate in the interzonal intraday electricity market. All PaMs in this dimension are assigned from 2022/2023 – 2030, even though they need to be implemented before the end of that period.
- (35) The draft NECP does not correctly reflect the functioning of the **single day-ahead and intraday market coupling** and it does not refer to the **relevant entities** implementing it.
- (36) The draft NECP also does not include and correctly reflect the legal obligation for the TSO to **join the EU Balancing Platforms**.
- (37) The draft NECP does not take into account the interlinks between the implementation of **electricity market coupling and** the application of **CBAM**. Market coupling is the cornerstone both for Moldova’s energy security as well as a pre-condition for a potential exemption from CBAM. The NECP should define PaMs to operationalise market coupling with the EU and Ukraine as soon as possible.
- (38) Certain PaMs in the Internal Energy Market Dimension are **lacking an adequate targeted quantified objective(s) and quantifiable and relevant progress indicators** (such as the modernization of grid i.e. to be measured by the length of the network²⁴, the establishment of short-term markets measured by the indicator ‘market coupling go-live’²⁵, the liberalization of energy markets measured by indicator ‘peak shifting hours’). Objectives and indicators in those instances could be revised to better reflect the objectives and main milestones of the PaMs. The indicated **implementing entity** for each PaM in this dimension would deserve a review as in some cases it is partly not correct or not comprehensive (for instance listing only the TSO as being responsible for the market operator set-up in PM_IEM7). There are PaMs which contain outdated information, and which are incorrect (for example by referring to gas in the case of electricity).
- (39) Regarding the national target for **reducing the number of energy-poor households** and the introduction of a methodology for assessing the number of energy-poor households, the methods used for the database and categories of the Energy Vulnerability Reduction Fund (“EVRF”) could be used. The EVRF has proven to be a successful financial

²⁴ PM_IEM3

²⁵ PM_IEM8

instrument to combat energy poverty. The draft NECP outlines the importance of focusing on vulnerable consumers in the promotion of energy efficient projects and the valorisation of renewable energy sources in the public and residential sector, however this principle is not translated into a concrete PaM. More details should be provided on PM_IEM12.

- (40) In Section: 2.4.2 Energy Transmission Infrastructure, the part addressing the gas sector contains outdated information and does not take into account the implementation of the new [EU TEN-E Regulation](#)²⁶ (“TEN-E Regulation”) along with the adoption of the new [list of Projects of Common Interest](#) (“PCI”) in the EU, in line with the newly eligible project categories. The projects highlighted in this section of the draft NECP are not eligible any more for PCI status in the EU, nor for Projects of Energy Community Interest (“PECI”) in the Energy Community. The geographical scope of the EU process has also changed with the inclusion of Projects of Mutual Interest (“PMIs”) in the EU TEN-E process, which now includes cross-border projects between the EU and non-EU countries, including Contracting Parties. This means that Contracting Party projects that link to an EU Member State are eligible to be included in the selection process in the EU and may receive PMI status under the new TEN-E Regulation.
- (41) The draft NECP illustrates the priority research areas in the **Research, Innovation and Competitiveness** dimension, however **tangible and quantified objectives and targets are missing, even though they may be updated in parallel to the draft NECP in the National Program for Research and Innovation**. In the listed priority areas, projects to help reducing industry-related emissions are not present.

2. Preparation and submission of the draft plan

2.1. Process and structure

The draft NECP was submitted by the authorities of Moldova to the Secretariat on 13 December 2023, after the legal deadline set in Article 9(1) of the Governance Regulation. The **draft SEA Report** was submitted to the Secretariat following an enquiry on 15 February 2024.

The **process of developing the draft NECP** is described, however only on a high-level, without providing details on the participants, the meetings and discussions within the inter-ministerial working group, public hearings and the overall public consultation. More information concerning what documents were shared with which stakeholders and when, as well as the views and

²⁶ Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013

comments received and how these were taken into account in the draft NECP must be provided in the final NECP.

The draft NECP follows the **structure** prescribed by the Governance Regulation, however there are headings which follow Annex I of the EU Governance Regulation and not the adapted Regulation applicable to Contracting Parties.

The NECP is expected **to be adopted in the form of a Government Decision**²⁷. The **Parliament** was not directly involved in the drafting of the draft NECP and no involvement is indicated for it at a later stage either.

2.2. Public consultation

The draft NECP refers to two rounds of discussions organised on the platform of Ministry of Energy for addressing main elements included in the NECP, however no further details are provided regarding the number and scope of participants, the expressed views and a description of how those views were taken into account in the drafting of the NECP.

It is stated that “All comments on the NECP and SEA are included into a comments’ table stating how comments have been incorporated into the NECP.” (page 64), however no table is annexed to the draft NECP.

The draft plan was published for public consultation between 5-19 February 2024 on the government’s public participation portal²⁸, this information is not included in the draft plan, which was submitted to the Secretariat earlier. Considering the volume and the complexity of the draft NECP and the lack of timely access to relevant information (draft SEA Report), the consultation timeframe for the draft NECP including the draft SEA Report would be important to be extended taking into account the date when all relevant information was published. The draft plan also fails to detail how marginalized groups, gender-responsive processes, or the voices of youth was included in its preparation.

A statement summarising how the environmental considerations have been integrated into the plan, and how the SEA report, the opinions gathered during the consultations, including the result of any transboundary consultations, have been taken into account, must be incorporated in the final NECP. The SEA report must comprehensively identify, describe and evaluate the likely significant impacts on the environment resulting from the implementation of the plan and the reasonable alternatives taking into account the plan’s objectives and the geographical scope.

²⁷ Based on the Information Note to the draft Government decision for the approval of the integrated National Energy and Climate Plan – https://particip.gov.md/ro/download_attachment/21936 - last accessed 14 February 2024

²⁸ <https://particip.gov.md/ro/document/stages/planul-national-integrat-privind-energia-si-clima-pniec-al-republicii-moldova-pentru-perioada-2025-2030/11984> – Last accessed: 13 February 2024

Additionally, it should outline the reasons for selecting the alternatives dealt with and monitoring measures.

2.3. Regional consultation

There is no description of how **regional consultations** of the draft NECP were carried out, which must be remedied in the final NECP. The submitted text outlines only an assessment – carried out by Moldova – of best practices, cross-border issues and policies of neighbouring countries. There is no information showing an active outreach to other Contracting Parties and EU Member States or to the sharing of the draft NECP with those countries. The contribution of Moldova to the consultations of neighbouring draft plans could also be described, indicating the potential links of other NECPs to Moldova's plan.

The assessment regarding the **impacts of the planned policies and measures** on other Contracting Parties and/or Member States of the European Union, and regional cooperation at least until the last year of the period covered by the plan focuses on listing cross-border projects and agreements and participation in regional and international cooperation platforms. There is no assessment presented regarding the impact of the planned PaMs.

If any **regional cooperation** took place in the development of the draft NECP, it should also be described in the final plan.

3. Assessment of the ambition of targets, objectives and adequacy of supporting policies and measures

3.1. Decarbonisation – greenhouse gas emissions and removals

The draft NECP includes a description of Moldova's 2030 **GHG reduction targets** articulated and defined in various formats. The reference to the commitments under the Paris Agreement and the related NDC of 2020 including the categories of conditional and unconditional targets helps to put Moldova's ambition into global context. On the other hand, **the draft NECP does not clearly mark the difference between the NDC's voluntary commitments, and the legally binding target adopted by the Ministerial Council**. As per the decision of the Ministerial Council, Moldova undertook the reduction of its GHG emissions compared to 1990 by 68.6% equivalent to the amount of total emissions of 9.10 MtCO_{2eq}, which applies to the total territory of Moldova.

GHG emissions **projections are presented until 2050** and are split between the two banks of the Dniester River. While on the Right Bank, considerable GHG emissions reductions are expected in the WPM scenario by 2050 – decreasing to a level of 0.915 MtCO_{2eq} – there are still GHG emissions

on the Left Bank projected in 2050 and amounting to 4.32 MtCO_{2eq}. Thus, there is **no climate neutrality foreseen to be achieved until 2050 considering both banks of the Dniester River.**

The presented figures for **GHG emissions projections are not consistent** across the draft NECP, which also reduces the clarity on the commitment to the target. Further details regarding the inconsistencies are listed in Section 6 of this Recommendation.

The draft NECP contains sectoral GHG emission reduction **targets for transport, agriculture, and the LULUCF** sectors in %, indicating absolute MtCO_{2eq} values for the year 2030. It is not elaborated in detail how the LULUCF target will be reached as it assumes a 20-time magnitude increase for sequestration. For the remaining sectors the targets appear realistic. There is a trajectory for the sectors presented in the analytical part.

GHG emission reductions are expected to stem from increased sinks (LULUCF) until 2030 – reaching from -122 ktCO_{2eq} in 2020 up to -2,610 ktCO_{2eq} by 2030 in the WPM scenario. The projected amount of sinks doubles between 2030 and 2035 – reaching cca. -5,000 ktCO_{2eq} and is expected to remain on that level until 2050. From 2030 a more substantial decrease in the energy sector-related GHG emissions is expected to strengthen the impact of the expansion of the sinks.

A coal phase out date is not applicable as 80% of electricity is imported and the main source of domestic energy is biomass.

Regarding **policies and measures**, the use of the terminology of conditional/unconditional measures – similarly to the targets – introduces uncertainty regarding the government's commitment to undertake them. As the Governance Regulation distinguishes only existing and planned PaMs invoking concrete definitions, it is advisable to stick to those categories in the NECP.

PaMs in this dimension lack quantified contribution to emissions reduction. This also jeopardizes the subsequent assessment of progress in achieving the targets.

Even though all sectors are covered by the PaMs, there is lack of impact of those PaMs in the industrial (IPPU) and agricultural sectors as emissions are projected to rise in these sectors until 2030 even in the WPM scenario.

Some PaMs, such as PM_DC3, PM_DC5, PM_DC10 or PM_DC15, do not lead per se to emission reductions. Additionally, the use of annual emissions reductions (KtCO_{2eq}) as a progress indicator for PM_DC3, PM_DC10 and PM_DC15 is not adequate.

Certain PaMs seem duplicative, such as PM_DC6 and PM_DC8.

The investment needs for PaMs are estimated and appear realistic.

3.2. Decarbonisation – renewable energy

The draft NECP acknowledges the overall **2030 target** in the Ministerial Council Decision in Chapter 2, and it sets a more ambitious objective of reaching **31.4%** share of renewables in the gross final energy consumption by 2030 in the WPM scenario²⁹. The formulation of this target (with projections outlined in Table 8) suggests that it applies for the whole territory of Moldova. However, Table 1 in Chapter 1 includes the same projection, but those figures include the Right Bank only. There are also **inconsistencies in the projections** for final energy consumption and the planned installed capacity for wind and solar PV in the text, which makes it unclear how the calculation of the target was done. While the target to which Moldova commits to is in line with the decision of the Ministerial Council, **it is not possible to verify how this target was calculated** (including both geographical scope and the level of final energy consumption) **and what capacity enhancements are expected to lead to the compliance** with that target.

There are **sectoral targets** for renewables in electricity (34.1%), heating and cooling (42.8%) and transport (7.6%, and at 8.9% with multipliers). Trajectories are provided until 2050 making the monitoring of progress easier.

Following Article 26 of the Renewables Directive, Moldova has adjusted its minimum target for renewable energy in **transport** by 2030, reducing it due to the fact that the share of biofuels, bioliquids, and biomass fuels consumed in transport sector was below 1% in 2022.

The anticipated share of renewables in **heating and cooling** slightly increases from 41.8% in 2020 to 42.7% in 2030, afterwards decreasing to 40.4% in 2040 to and 32.2% in 2050. The draft NECP provides an explanation for this decrease – it is due to an expected decrease in the consumption of energy in “other sectors” and an increase in natural gas consumption by CHPs and electrification of heat as of 2040.

While it is positive that an explanation is provided, the target for heating and cooling is not ambitious enough and thus not aligned with the Renewables Directive. Article 23 of the Directive requires the increase of renewable in heating and cooling in the period from 2020 to 2030 by 1.3 or 1.1 **percentage points** (ppt) (if waste heat is not taken into account) annually, and for 0.65 / 0.55 ppt annually if a share of renewables is between 50% and 60%. Since the 2020 renewables share in the heating and cooling sector in Moldova was 41.7%, and waste heat is not counted in the **target for heating and cooling, the increase is supposed to be 1.1 ppt annually and the 2030 renewables share should reach 52.8%**³⁰.

²⁹ “Moldova’s objective is to increase the ratio of renewable energy to gross final energy consumption to 31.4% by 2030 in case of the scenario with planned measures (WPM).” - The Integrated National Energy and Climate Plan (draft) December 2023, (p. 72) Chapter 2.1.2.i

³⁰ It is to be noted that biomass is used in Moldova mostly in rural areas in stoves with low efficiency (cca. 30-35%). Promoting energy efficiency in those areas, by subsidizing the installation of more efficient boilers such as with an overall efficiency of 80-84%, or heat pumps, could lead to the reduction in the use of biomass, reducing the share of renewables in heating and cooling. These circumstances are not described in detail in the draft NECP.

Considering the outlined **policies and measures**, the draft NECP does not address the issue of **sustainability and GHG emissions saving criteria for biofuels, bioliquids and biomass**, which aggravates the issue that the amendments of the law on renewables also fail to incorporate these criteria. There is no PaM related to establishing **guarantees of origin**.

The PM_DC26, titled "Amended Law on Promotion and Use of Renewable Energy Sources," makes reference to the previous Renewable Energy Directive (2009/28/EC) instead of the new one (Directive (EU) 2018/2001). Considering that the amendments were approved at the end of 2023, the PaM should include details on the implementation, encompassing the impacted sectors, implementation cost etc.

In general, throughout the entire document, and particularly in the section on PaMs, the references to the renewables law of 2016 should make clear that the amendments made in 2023 are also included. There is an overarching **reliance on existing government plans**, such as the increase of renewable energy capacities, rather than focusing on the capacities required to achieve the target outlined in the NECP (for example, PM_DC27 and PM_DC28).

Overall, the **PaMs lack specificity**, and they detail what is currently in place instead of outlining the necessary actions to achieve the targets.

PM_DC29 focuses on net metering, a specific support scheme, rather than addressing **self-consumption** in a broader context. It is already outdated in light of the amendments to the renewables law that introduced the net billing scheme. Additionally, it would be useful to introduce a target for self-consumption.

Two PaMs are suggested as support schemes, one with fixed prices (PM_DC27) and another with a fixed tariff (PM_DC28). However, from the name and the description of the PaMs **no introduction of market-based support schemes is visible**, which would align with the requirements of the Renewables Directive and with the amendments to the renewables law.

The draft NECP envisages two PaMs for the integration of renewables in heating and cooling:

1. PM_DC30 Fostering deployment of RES in district heating and
2. PM_DC31 Promotion of heat pumps for H&C.

PM_DC30 envisages the increase of **renewables share in heating** and cooling by 1.1% each year and that all district heating systems become efficient by 2025, which timeline is **contradicted by the Law on Renewables of Moldova that sets out a deadline of 2029**. This measure is unclear and does not properly reflect the requirements of the Renewables Directive. Namely, the increase is supposed to be for **1.1 percentage points per year rather than 1.1%**. It is also not clear whether it refers to the whole heating and cooling sector or only district heating. Moreover, this measure implements the latest Renewables Directive and not the earlier version (Directive 2009/28/EC) as indicated in the draft. Finally, there is no explanation of how and which renewables will be integrated in district heating, especially considering that natural gas is indicated to be the only source for generating district heat (Annex 2).

PM_DC39 focuses on **promoting energy communities** but does not establish a connection to energy efficiency.

The funds for the **transport** PaMs are either not defined or not sufficient. There is no quantified objective for the electrification of rail and road transport. Specification of concrete activities and connection with other dimensions are also missing.

3.3. Energy efficiency

The overall **2030 target** is indicated in Chapter 2 addressing targets, at the level of 3 Mtoe of primary energy consumption and at 2.8 Mtoe final energy consumption in 2030, both being in line with the Ministerial Council decision. The projections by 2030 however in Table 1 – applicable to the Right Bank only – show a level of 2.82 Mtoe of primary energy consumption and 2.55 Mtoe of final energy consumption in the WPM scenario. Since the difference between these projections and the targets in the Ministerial Council decision is similar, it may be assumed that **the overall targets are considered for the Right Bank only**, and that **the energy consumption – both primary and final – on the entire territory of Moldova is expected to surpass the 2030 targets defined by the Energy Community Ministerial Council**.

There are projections in Chapter 4 for the WEM scenario both for primary and for final energy consumption, presented for each sector until 2050 (Table 44.). These are however the same as those presented in Chapter 2, where normally the projections of the policy scenario are displayed.

There are **sectoral target indicators of energy savings** in 2030 for the transport sector and the industry sector (intensity indicator, as well reduction of electricity, gas, and district heat transmission losses), with the industry target appearing ambitious. There is a target for reducing district heating losses from 19.2% in 2020 to 18.1% in 2030 (1.1 percentage points reduction).

The draft NECP recognizes the **energy-efficiency-first principle**, putting for instance energy efficiency as an integral part of energy security dimension, to be applied in the whole energy chain (from supply of energy to energy end-use). The definition of “Energy poverty” is introduced in the Law on Energy Efficiency. It is also mentioned that energy efficiency and renewables measures significantly contribute to the achievement of the decarbonization target. Energy efficiency and renewables are also among key priorities of energy research in Moldova. It is also mentioned that the new Energy Strategy until 2050 will be developed by considering energy-efficiency-first principle.

The draft NECP contains the targets from the Energy Efficiency Directive on annual **energy savings of at least 0.8% and the renovation of 3%** per year of central public administration authorities buildings as of 2024. The respective PaM from the NECP should provide details from the recently adopted by the Moldovan Government Program for the renovation obligation for buildings owned or rented by central public authorities for the period 2024-2026.

Concerning **policies and measures**, a number of ongoing or planned energy efficiency and renewable projects are implemented with the support of international donors and are properly listed and described in the draft NECP (adding more certainty that they are realistic and implementable).

The overview of investment needs in Chapter 5.3. shows that **all key donors are active in the energy efficiency area**.

The draft NECP recognises a high potential for the implementation of energy efficiency measures and lists the relevant sectors (particularly end-use sectors like buildings and transport). However, it states that only the Energy Strategy until 2050 will include energy efficiency measures for sectors with high potential. In addition, it states that the new Energy Strategy 2050 will aim to create financial initiatives and ensure access to finance for both the public and private sectors.

While the **target in Article 7 of the Energy Efficiency Directive** is calculated and its achievement split between the implementation of the Energy Efficiency Obligation Scheme and alternative measures, there are no concrete PaMs explaining the details of the implementation and the achievement of the target, providing details about the contribution to the overall EE target of the Energy Efficiency Obligation Scheme, using information from the Methodology and Programme for implementation of the Energy Efficiency Obligation Schemes for the period 2024-2026, as adopted by the Moldovan Government. Explanations regarding the EEOS financial contribution to the activity of the announced Moldovan Residential Energy Efficiency Fund would also be important to be provided.

The **Law on energy labelling** of energy-related products (Law No. 306 of 26/10/2023) and the Government Decision no. 1003/2016 for the approval of regulations regarding the energy labelling requirements for products with energy impact do not regulate the energy labelling of local space heaters and solid fuel boilers, nor does PaM PM_EE19 on the Implementation of requirements for energy labelling for products of energy impact include the transposition of energy regulations for energy labelling of local space heaters and solid fuel boilers. **Having in mind the high use of solid biomass for household heating, it is important to transpose and reflect these energy regulations in the NECP.**

The draft NECP recognizes the importance of **district heating** in achieving decarbonisation, energy efficiency, energy security and the need to make the cogeneration units and district heating network more efficient. Two PaMs envisage the installation of new and the modernization of existing highly efficient CHPs, as well as the reduction of district heating losses. While the draft provides information on quantified objectives and investment needs, progress indicators and the status of implementation are missing. It is advisable to include these parameters to track the progress effectively.

The draft NECP also only mentions in Section 4.3 that the **National Assessment of Potential for Efficiency in Heating and the Heating Roadmap** will be done by the World Bank. However, the draft plan does not reflect on the implementation of consumption metering and billing of district heat in line with the Energy Efficiency Directive.

3.4. Energy security

Concerning energy security **objectives**, the importance of **diversification regarding electricity supply** is addressed properly, identifying transmission/interconnection and generation projects needed to decrease the dependency on MGRES, the dominant electricity producer in Moldova.

Flexibility however, is addressed only partially, without explaining that Moldova is completely lacking load and frequency service providers at the moment. The different types of reserves needed to control cross-border exchanges and the frequency³¹ do not exist, and the electricity system is not controlled in this regard. This also prevents Moldova from fully joining ENTSO-E until the appropriate amount of reserves is assured. It is essential that the NECP elaborates on this in more detail, especially defining PaMs to increase flexibility within Moldova's electricity system.

Regarding **resilience**, Moldova's electricity system is currently vulnerable due to the significant dependency on one electricity producer, MGRES, the war in Ukraine and the restricted electricity exchange possibilities with Romania. Even though the PaMs to improve resilience have not been specifically elaborated in the draft NECP, the defined activities regarding energy security and the internal market dimension appear appropriate to provide the necessary level of improvement.

The draft NECP elaborates on the **gradual electricity market development** and **regional integration** and, in this matter, clearly states that Moldova's perspective is to integrate its market with the neighbouring countries and the EU as a whole.

The objectives of **gas security** are defined in line with the **diversification strategy**, including a **regional market development** outlook, and in line with relevant national plans. Certain energy security objectives and their feasibility significantly depend on regional cooperation, and thus would need to be verified and aligned with the neighbours. The level of details in the gas security objectives could be more elaborated as they currently focus only on infrastructure capacity improvement without describing diversification of sources or the flexibility needed to support the efficient use of existing capacities.

Energy security being dependent on the regional market integration and consequently on the implementation of the common regulatory framework must be aligned with the targets, objectives and PaM of the Internal Energy Market and also the Decarbonization dimensions. For instance, reducing natural gas import dependency can be to a certain extent reached by national production of **renewable gases** and such an option is not mentioned at all.

Certain measures which are already implemented – such as the reduction of reliance on Russian gas and storing gas in neighbouring countries – are not reflected in Sections 2.3. and 4.4. respectively.

One specific issue for Moldova is the **interdependence between electricity and gas sectors**. Considerations of the impacts of the import of (still Russian) gas for electricity production in the

³¹ Frequency Containment Reserve, Frequency Restoration Reserve, Replacement Reserve

Left Bank and the **expiration of the gas transit contract via Ukraine by the end of 2024** are not reflected in Sections 2.3 and 4.4.

Without prejudice to the fact that statistics for 2021 do not demonstrate a business-as-usual year, due to the significant changes and circumstances relevant to the gas sector in the last few years, having the 2020 as a reference year in the draft NECP could lead to misleading conclusions.

Gas security objectives rely on regional cooperation, however this is not well elaborated (regional cooperation along Trans-Balkan Pipeline, burden sharing mechanisms and other tools to fulfil the objectives of Regulation 1032/2022 and ensuring sufficient level of stored gas).

Concerning policies and measures, the progress may be followed for transmission lines but not for power plants. More qualitative progress indicators could be defined, especially for the PM_ES10 (Energy mix diversification). It is mentioned in the draft NECP that according to the Energy strategy around 800 MW of new generation capacities are planned, but this is not specifically defined in the relevant PaM.

It is important that Moldova's draft NECP is checked for **consistency with the draft Ukrainian NECP** once that is available. The updated Romanian draft NECP considers the project with Moldova (Succeava – Balti interconnection), also including internal network reinforcements in order to support the new interconnection line.

Investment needs are partially estimated (mostly under examination). The total investment value for the line Vulcanesti – Chisinau (EUR 260 mln) appears too high and therefore a detailed breakdown of costs for this line should be defined in the NECP. The Government has advanced with the mobilization of financial resources for the two other interconnections with Romania – Balti - Suceava and Straseni - (RO), whose status-quo would need to be described in the NECP.

The **impact of PaMs related to energy security in electricity on other Contracting Parties and EU Member States** in the region is not assessed, but it is expected to be positive since they would increase interconnectivity and a number of production facilities which will participate in the integrated electricity market.

PaMs PM_ES7 and PM-ES8 correctly refer to Regulations 1938/2017 and 1032/2022 which are not mentioned in Section 2.3. defining the objectives.

It is not clear whether PM_ES6 is complementary to PM_ES4, it is part of it or it is an upgrade.

The required investment is assessed only for PM_ES4, i.e. for one out of five measures related to gas security.

Certain measures to increase security of supply and regional cooperation, such as the implementation of gas network codes on interconnectors, are not mentioned in subsection ii of Section 3.3.

The assessment of progress in the future would not be possible with progress indicators missing (PM_ES 5, 6 and 7) or when they are defined in too general terms (PM_ES4 and 8).

It is not visible in the draft NECP whether the **impact of gas related measures to other Contracting Parties and EU Member States** was assessed or considered.

Gas Infrastructure related PaMs in Section 2.4.2 could include long-term projects in line with the new eligibility criteria of EU PMI and EnC PEI processes based on the new TEN-E Regulation. Such projects – for instance dedicated to hydrogen – can provide for additional options when setting long-term targets beyond 2030 and could provide links to the Decarbonization Dimension.

3.5. Internal energy market

In the **electricity sector**, the draft NECP does not account for the **latest legal and policy developments** such as the adoption of the new Electricity Integration Package which sets new legal obligations and deadlines. The draft Plan does not reflect the **necessary human resources and expertise** in the administration and in the entities such as TSOs to enable the full implementation of the Package.

Energy poverty and the concept of a **vulnerable energy customer** are legally defined by the Law on Energy Efficiency and the Law on the Energy Poverty Reduction Fund, respectively. Information on energy poverty indicators is provided based on the EU Household Budget Survey and data from the National Statistical Office. Moldova has various energy-related social assistance programmes and, since 2022, a dedicated Energy Vulnerability Reduction Fund (EVRF), which provides subsidies for the consumption of natural gas, thermal energy in district heating and electricity in the maximum amount established by Government.

The targets and objectives for the **gas market** are closely related and well linked to the energy security dimension.

It could serve strategic foresight if the gas-related PaMs in the NECP were aligned with the provisions of the **roadmap towards the development of a Moldovan well-functioning gas market**, adopted at the latest HLED meeting EU – Moldova, including the potential coupling with the neighbouring markets being one of the measures in the Roadmap. The real opening of the market is essential.

The introduction of a daily balancing mechanism, the use of short-term standardized products and the establishment of a VTP by “Vestmoldtransgaz” should be further strengthened. Options to use available trading platforms which are used also by neighboring countries could be explored to speed up the liberalization efforts.

Concerning **policies and measures**, it is important to include measures (and costs) related to the transposition and implementation of the **general principles of dispatch and redispatch of renewable energy** as outlined in the Electricity Regulation.

The draft NECP foresees one PaM that aims to introduce a definition of **energy poverty**, identify vulnerable consumers and design mechanisms for reducing the number of people living in energy

poverty. Additionally, it is envisaged to establish public programmes for the thermal insulation of buildings for energy poor communities. The responsible bodies for monitoring and implementing the PaM, the estimated costs, and the source of funding are listed. Other PaMs, such as the one on market opening address energy poverty indirectly for instance increasing the quality of energy supply and the support of smart meters. Another PaM is dedicated to facilitating the process of changing the supplier, thus contributing to improving the situation of energy consumers. Other recognized interlinkages include energy efficiency, smart meters, and the renovation of residential buildings. The need for an emphasis on vulnerable consumers in the promotion of energy efficient projects and the valorization of renewable energy sources in the public and residential sector is outlined, however, this objective is not put into a concrete PaM.

The **natural gas infrastructure projects** described in Chapter 2.4.2 are not in line with the adoption of the new TEN-E Regulation and the removal of natural gas projects from the list of supported categories.

The PaMs do not always express quantifiable indicators against which their progress will be measured (for example IEM 9 in gas or IEM 4).

3.6. Research, innovation and competitiveness

The draft plan outlines that the national objectives relevant for this dimension are formulated in the **National Program for Research and Innovation**. That policy document is updated every four years, the latest update being conducted in parallel with the development of the draft NECP. The priorities from that programme could be integrated in the NECP.

It is not elaborated in the priority research areas (Figure 18) what projects and activities the priority “Safe, clean and efficient energy” under the heading “Environment and climate change” contains.

Moldova’s involvement in international research programmes such as the Horizon Europe, and other programmes such as Cross Border Cooperation (CBC) is described.

The main objectives of the **draft Smart Specialization Strategy** are listed in the draft NECP, however it would be welcome to provide a more robust overview how the priorities of that Strategy would strengthen the NECP and how the projects in the Strategy facilitate the PaMs of the NECP.

4. Internal coherence, consistency, policy interactions and alignment with other strategic documents

The draft NECP describes the **current policy context** in detail, including obligations under the Energy Community Treaty, and it contains references to other existing and currently drafted domestic strategic and policy documents such as the NDC, the National Climate Change

Adaptation Program until 2030 and the Action Plan for its implementation, the National Development Strategy “European Moldova 2030”, the Energy Strategy 2030, the concept of the Energy Strategy 2050, the concept of the Long-term Building Stock Renovation Strategy and the Smart Specialization Strategy until 2030.

Considering that additional national strategies and legal acts are currently drafted and/or revised in several areas that are relevant to the NECP such as:

- the Energy Strategy 2050,
- the National Economic Development Strategy 2030³²,
- the Law on innovative test spaces in the field of energy regulation³³,
- the draft Climate Law,
- the draft Government decision on the establishment of the mechanism for intersectoral coordination of activities in the field of climate change³⁴,
- the Environmental Strategy for the years 2024-2030³⁵,
- the National Industrial Development Program for the years 2024-2028³⁶,
- draft Government decision for the approval of the Regulation on the monitoring, reporting and verification of greenhouse gas emissions from stationary installations and activities in the field of aviation³⁷,

it is important that there is a strong coordination during the drafting and that there is alignment between these documents and the NECP when they are adopted.

³² <https://particip.gov.md/ro/document/stages/aviz-privind-consultarea-publica-a-proiectului-hotararii-guvernului-cu-privire-la-aprobarea-strategiei-nationale-de-dezvoltare-economica-2030-snde-2030/11846> - Last accessed 14 February 2024

³³ <https://particip.gov.md/ro/document/stages/ministerul-energiei-anunta-despre-initierea-procesului-de-consultare-proiectului-analizei-impactului-de-reglementare-asupra-legii-cu-privire-la-spatiile-de-testare-inovativa-in-materie-de-reglementare-in-domeniul-energiei/11868> - Last accessed 14 February 2024

³⁴ <https://particip.gov.md/ro/document/stages/anunt-privind-initierea-consultarilor-publice-la-proiectul-hotararii-guvernului-cu-privire-la-instituirea-mecanismului-de-coordonareintersectoriala-a-activitatilor-in-domeniul-schimbarilor-climatice/11888> - Last accessed 14 February 2024

³⁵ <https://particip.gov.md/ro/document/stages/anuntprivind-avizareaexpertizarea-proiectului-de-hotarare-cu-privire-la-aprobareastrategiei-de-mediu-pentru-anii-2024-2030-numar-unic-85mm2024autor-ministerul-mediului/12001> - Last accessed 14 February 2024

³⁶ <https://particip.gov.md/ro/document/stages/anunt-consultare-publica-privind-inaintarea-spre-consultare-publica-referitor-la-proiectul-de-hotarare-cu-privire-la-aprobarea-programului-national-de-dezvoltare-industrial-pentru-anii-2024-2028/12009> - Last accessed 14 February 2024

³⁷ <https://particip.gov.md/ro/document/stages/anunt-privind-initierea-consultarii-publice-a-analizei-impactului-de-reglementare-la-proiectulhotararii-de-guvern-pentru-aprobarea-regulamentului-privind-monitorizarea-raportarea-siverificarea-emisiilor-de-gaze-cu-efect-de-sera-de-la-instalatiile-stationare-si-activitatile-din-domeniulaviatiei/12000> - Last accessed 14 February 2024

The **Low Emissions Development Program until 2030 and NDC** are described and show consistency with the draft NECP regarding the national objectives and targets.

The **analytical section contains several inconsistencies**, which are listed in Section 6 of this Recommendation.

The draft NECP does not refer to Moldova's participation in the **Global Methane Pledge**. Methane is mentioned in light of improving energy efficiency in natural gas infrastructure and indirectly in one of the PaMs in agriculture regarding the aim to reduce the level of methane formation in the digestion process.

Policies and measures are listed in a structured manner, it is however not indicated which PaMs are considered for the WEM and which are included in the WPM scenario.

The use of **EU terms from the Union version of the Governance Regulation** in the headings may confuse the reader with the references to "Member States" or to the PaMs of Moldova "affecting the EU ETS" which are not part of the legally binding Energy Community Governance Regulation. The reference to the Union's renewable energy target is also incorrect, as there is no requirement for Moldova for a "national contribution to achieve the binding **EU-level** target of at least 27% in 2030"³⁸. The references to "EU support and the use of EU funds" in several headings is an incorrect use of the EU Governance Regulation template, whereas the Contracting Parties are required to indicate only the financing measures on national level. The use of the EU terminology triggers the formulation of content in the NECP that is either not required from or applicable to Moldova.

5. Investment needs

The draft NECP includes an overview of the availability of financial support broken down by policy areas and donors. Energy efficiency and climate mitigation projects are highlighted as key areas having received support between 2015 and 2021, whereas in addition to these sectors, renewable energy and transport is expected to be treated as a priority as well.

There is also a summary of climate change-related priorities of the energy sector and of the financing required and benefits expected from the key measures in the NECP of Moldova. Unfortunately, it is not clear whether there is any overlap between the figures for investment needs related to the key measures (Table 74) and the list of financing needs in the context of ensuring low-emissions development of Moldova (Table 75).

The use of several various currency forms (MDL, USD, EUR, CHF) makes a comparison and summary of the total investment needs difficult.

³⁸ Title of section 2.1.2 point i. of the draft NECP

Annex 6 of the draft NECP provides an overview of the PaMs including the investment costs in EUR. Even though the costs for some PaMs are not available, the table provides a useful summary, according to which the required financial sources for each dimension are as follows:

- Decarbonisation³⁹: EUR 11,645.75 mln
- Energy efficiency: EUR 8,349.76 mln
- Energy security: EUR 393.6 mln (there is a cost estimate only for 6 out of 10 PaMs in this dimension)
- Internal energy market: EUR 904.3 mln
- Research innovation and competitiveness: EUR 247.7 mln

The cost estimate for PaM PM_DC23 in Annex 6 is missing a decimal separator, and is indicated as EUR 23,375 mln instead of EUR 233.75 mln.

6. Robustness of the analytical basis of the draft plan

The draft plan distinguishes **two scenarios**, a baseline with the existing measures (WEM) and a policy scenario with additional measures (WPM). A detailed description of the differences in assumptions among the two scenarios would help a better understanding.

The analytical part of the draft plan includes chapters 4 and 5, whereas results of projections also appear in the descriptive part in chapters 1 and 2. There are several **inconsistencies in the presented figures**, which makes the assessment of the actual projections and targets and thus the overall ambitions and direction of the draft NECP impossible. **A thorough revision of all the figures in the plan is necessary in order to substantiate the descriptive parts with the results of the analysis and modelling.**

The inconsistencies found include the following:

GHG emissions between Tables 1-2 and Table 38

- Total GHG emissions in the *energy sector* in 2030 in the WEM scenario:
 - Add up to **8,581 ktCO_{2eq}** from Table 1 and Table 2;
 - Are indicated at **8,490 ktCO_{2eq}** in Table 38;
- Total GHG emissions in the *energy sector* in 2030 in the WPM scenario:
 - Add up to **8,294 ktCO_{2eq}** from Table 1 and Table 2;
 - Are indicated at **7,724.5 ktCO_{2eq}** in Table 38;

³⁹ Including GHG emissions reduction and renewable energy

- Total GHG emissions in 2030 (including LULUCF) in the WEM scenario:
 - Add up to **10,199 ktCO_{2eq}** from Table 1 and Table 2;
 - Are indicated at **11,163 ktCO_{2eq}** in Table 38;
- Total GHG emissions in 2030 (including LULUCF) in the WPM scenario:
 - Add up to **8,493 ktCO_{2eq}** from Table 1 and Table 2 and indicated in Figure 8;
 - Are indicated at **8,878 ktCO_{2eq}** in Table 38;

GHG emissions between Table 1 and Table 39

- Table 39 does not indicate the territorial coverage of the data when portraying GHG emissions for the period 2020 – 2050 in both scenarios, in ktCO_{2eq}. The introduction of the section where Table 39 is located reads: “Emission projections from the ATULBD have been incorporated to provide the table below outlining projected emissions in the WEM scenario versus the WPM scenario” (Page 219).
- The magnitude of figures in Table 39 (cca. 5.1 MtCO_{2eq} in 2030) is closer to the values projected for energy-sector GHG emissions for the Right Bank of the Dniester River (e.g. Table 1, i.e. 4.8 – 8 MtCO_{2eq}) than the values covering both banks, however the values even between the two tables do not match;

Projections of GHG emissions up to 2050 in Figure 22

- The section where Figure 22 is illustrated describes issues in the Republic of Moldova, however the Figure appears to reflect the projected emissions only for the Right Bank of the Dniester River (i.e. cca. 5.1 MtCO_{2eq});
- Following 2030, a substantial decrease in GHG emissions is indicated until 2040 in the transport, services – and to some extent in the residential – sectors whereas slight increase in emissions is projected in the agriculture and central electricity production sectors. The overall emission reduction is then followed by stagnation on the level of cca. 4 MtCO_{2eq} until 2050. That projection highlights that no climate neutrality is foreseen to be achieved by 2050. It is also not in line with any of the 2050 projections in the WPM scenario (regardless of territorial coverage);
- Almost all PaMs are defined until 2030 and from their description it is not clear which measures would trigger such a significant decrease in GHG emissions between 2030 and 2040 as indicated on Figure 22, and no explanation is provided in the analytical section either;

Figures for 2020 are inconsistent across tables, figures and scenarios

- **RES electricity** share in 2020: **2.1%** (Table 42, no scenario indicated), **2.4%** (Table 10, WEM), **2.2%** (Table 11, WAM), **3.1 %** (Figure 23, no scenario indicated), **3.12%** (Table 1, WEM & WAM);

- **RES Electricity Generation (ktoe)** also provides different figures for 2020 in Table 13, Table 14 and Figure 26 – the inconsistency regarding renewables share and level of generation for 2020 also undermines the authenticity of the projections;
- GHG emissions are indicated on different levels for 2020 in Table 1 (5.412 ktCO_{2eq}) and on page 284 in the textual description (4,905 ktCO_{2eq} in WEM scenario and up to 4,895 ktCO_{2eq} in the WPM scenario), even though the figures for 2050 do match;

Projections of installed wind and solar PV capacity by 2030

- The figures outlined on page 88 do not correspond to the projections in Table 1, Tables 13 and 14 and the tables on pages 288 and 289

Projections to 2030 regarding primary and final energy consumption in both scenarios

- Table 20 in Chapter 2 shows the **national indicative targets for energy efficiency**. There is no indication of any territorial limitation of this target and it is indicated as a “national target”. Chapter 2 usually outlines the projections of the **WPM scenario**. In Table 20, **primary energy consumption is 2.868 Mtoe** and **final energy consumption is 2.58 Mtoe** in 2030;
- Table 44 in Chapter 4 outlines projections in the **WEM scenario** and includes **exactly the same figures as Table 20**;
- Table 1 in Chapter 1 provides a summary of NECP indicators for the Right Bank of the Dniester River in both scenarios:
 - **Primary energy supply** (sic!) is **2.998 Mtoe** in WEM and **2.82 Mtoe** in the WPM scenario in 2030;
 - **Final energy consumption** is **2.701 Mtoe** in the WEM and **2.554 Mtoe** in the WPM scenario in 2030;
- There is inconsistency both regarding territorial coverage and also among the values in the different scenarios.

The **projections assessing the impacts of WEM and the WPM scenarios** describe the trends visible on the graphs, but provide no explanation why the anticipated changes take place, what PaMs are the drivers.

There is **no carbon price assumption** in either of the scenarios, even though the implementation of CBAM is expected to function as a quasi-carbon price on the goods produced in the relevant CBAM sectors and exported to the European Union.

7. Best practices

As **regards general approach and methodology**, the draft NECP is structured in a clear manner, includes all main elements as prescribed by the Governance Regulation and provides an extensive overview of the legal framework, policy documents and the overall policy context of each dimension on national level. Policies and measures are listed and presented in a clear format.

In **energy efficiency**, the draft NECP recognizes the importance of district heating for achieving decarbonisation, energy efficiency and energy security goals and the need to make cogeneration units and district heating networks more efficient.

The most important PaMs regarding the **energy security** dimension have been properly identified and defined (in the electricity sector, new interconnection lines to Romania, and diversification of the generation mix). The PaMs regarding gas security of supply are in principle in line with the targets of the gas infrastructure project diversification; they are properly identified and to a high degree realistic.

The ongoing and planned projects supported by donors are clearly listed in Annex 3 and Annex 4 of the draft NECP includes another detailed overview of project-level financing and support programmes in energy and climate between 2015-2021.