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ANNEX

ANNEX

to the

Communication to the Commission

Approval of the content of a draft Commission Notice on the Guidance to Member States for the update of the 2021-2030 national energy and climate plans

Draft Commission Notice on the Guidance to Member States for the update of the 2021-2030 national energy and climate plans

Record high energy prices since the second half of 2021, exacerbated by Russia's unjustified and unlawful military aggression against Ukraine, give a strong impetus to accelerate the implementation of the European Green Deal and reinforce the resilience of the Energy Union by speeding up the clean energy transition and ending any dependence on Russian fossil fuels. At the same time, recent extreme weather conditions have put additional pressure on energy supplies, affected crop yields and inland navigation, and impacted the wellbeing of citizens, giving a stark warning on the need to adapt to the impacts of climate change.

Those recent developments highlight the relevance of integrated planning for energy and climate policies. Today, more than ever, a strong Energy Union and coordinated climate action are the prerequisite for solidarity, prosperity and sustainability in the European Union. To rapidly enhance energy security and speed up the transition towards climate neutrality in a fair manner, Member States and the European Union need to build on the strength of the governance system established at European level.

The Regulation on the Governance of the Energy Union and Climate Action (Governance Regulation)¹ establishes a flexible yet robust governance system for transparent and mutually reinforcing collaboration between the EU Member States and the European Commission. This helps ensure a consistent approach between energy and climate policies and coordinated action across Member States.

The national energy and climate plans (hereafter national plans or NECPs) are the central strategic planning tool under the Governance Regulation. The NECPs provide short, medium and long-term investment predictability, especially in uncertain times, and are crucial for mobilising the massive investment needed to achieve the collective ambition of climate neutrality and for having a fair and just transition, while preserving energy security and affordability. They help Member States deliver together on the energy and climate objectives under the European Green Deal, the European Climate Law² and the Fit for 55 package of proposals³ including the higher ambition on energy efficiency and renewable energy as well as the EU's international commitments under the Paris Agreement.

The NECPs also play a key role in delivering on the REPowerEU plan⁴, in the light of the increased challenges for a more resilient Energy Union. Since the start of the energy price rise in mid-2021, the EU has adopted a comprehensive and tailored emergency response

¹ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action (Governance Regulation).

² Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality (European Climate Law),

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Fit for 55": delivering the EU's 2030 Climate Target on the way to climate neutrality. COM/2021/550 final; Hydrogen and Decarbonized Gas Package COM/2021/803 and COM/2021/804.

⁴ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, REPowerEU plan, 18 May 2022, COM (2022)230 final.

to address the energy crisis, triggered by the latest geopolitical developments. This will reshape the Energy Union in the run-up to 2030 and beyond. National plans must capture the critical challenges of energy security and affordability. This includes the need to swiftly diversify energy supply, to develop a consistent timetable for gas storage⁵, to reflect the emergency demand reduction⁶ and emergency intervention to address high energy prices and enhance solidarity⁷.

Member States shall update their national plans for 2021-2030 by June 2023 (draft plans) and June 2024 (final plans)⁸. Considering the significantly evolved policies and geopolitical circumstances in energy and climate since the preparation of the initial NECPs in 2019-2020, the updates should focus on the need for more ambitious climate action, a faster clean energy transition, and increased energy security. The updated NECPs should allow the EU to move towards a more resilient and sustainable Energy Union, including by rapidly reducing dependence on Russian fossil fuels, while leaving no one behind.

This document offers guidance to Member States on the process and the scope of preparing the draft and final updated NECPs, notably by identifying good practices and outlining the implications of recent policy and geo-political developments, within the legal framework established by the Governance Regulation, and in particular its Annex I⁹.

In the process of preparing this guidance, the Commission fully engaged with Member States at technical level and consulted with stakeholders through a dedicated stakeholder workshop on 8 September 2022¹⁰, external events and bilateral contacts. This guidance should be seen as one element of the continuous exchange and cooperation throughout the process.

Box 1: Principles and good practices for updating national energy and climate plans

- **Set higher ambition to speed up the green transition to climate neutrality and reinforce resilience of the energy system in line with the Climate Law, Fit for 55 package and REPowerEU.** Particular attention should be devoted to renewable energy, energy efficiency, energy security, and curbing greenhouse gas emissions.
- Strengthen planning within the NECPs to ensure a **fair and just** transition, mitigating **social and employment impacts**, tackling **labour and skills shortages**, reducing **energy poverty**, and ensuring affordable **access to essential services for all**.
- Provide national objectives and targets, including on funding, that **show concrete pathways to 2030 and to 2050, in alignment with the national long-term strategies**.
- **Integrate adaptation goals** and reflect them wherever relevant in the five dimensions of the updated NECPs.

⁵ Following the adoption of Regulation (EU) 2022/1032 of the European Parliament and of the Council of 29 June 2022 amending Regulations (EU) 2017/1938 and (EC) No 715/2009 with regard to gas storage.

⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and social Committee, the Committee of the Regions “Save gas for a safe winter” COM (2022) 360 final and Council Regulation (EU) 2022/1854 of 6 October on an emergency intervention to address high energy prices

⁷ Proposal for a Council Regulation Enhancing solidarity through better coordination of gas purchases, exchanges of gas across borders and reliable price benchmarks, COM (2022) 549 final

⁸ See Article 14 and requirements of Chapter 2 and Annex I of the Governance Regulation.

⁹ Only the Court of Justice of the European Union is competent to authoritatively interpret Union law.

¹⁰ [Stakeholder workshop on updates of national energy and climate plans | European Commission \(europa.eu\)](#).

- Set out **objectives and targets to reduce methane emissions** and integrate **increased targets** as well as mitigation and adaptation measures in the **land-use, forestry and agriculture** sectors, with regard to CO₂ and non-CO₂ emissions and carbon removals.
- **Exploit synergies between the energy and digital agenda** to trigger the digitalisation of the energy system.
- **Improve the research, innovation and competitiveness dimension** in particular with specific targets and objectives while integrating the diversification of production capacity and the skills development to accelerate the clean energy transition.
- **Engage in wide and inclusiveness consultation** with civil society, local authorities, social partners, and sectoral stakeholders early in the process.
- **Strengthen regional cooperation as an integral aspect of the national plans:** in particular regarding the Energy Security dimension, to identify consistent policies and in-depth solidarity.
- **Explore synergies** between the objectives, targets and contributions, and policies and measures of the **five dimensions of the Energy Union**¹¹.
- **Draw lessons from the initial NECPs**, their assessment from the Commission and the status of their implementation, to identify gaps and areas for improvements towards increased ambition and delivery.
- **Ensure consistency with other planning instruments** and reflect the relevant policies, measures and investments in the updated NECPs¹².
- Formulate a **comprehensive, updated and granular analytical basis**, embedding economic, employment, social, research, innovation, competitiveness and environmental impacts as well as the contribution that will be made by the circular economy.
- **Provide a detailed financing plan addressing the investment needs for each of the five dimensions**, through the cost-efficient use of public budget support and the mobilisation of private investment, including via financial instruments and innovative financing schemes.
- Take into consideration and ensure consistency with the **Country Specific Recommendations** issued in the context of the **European Semester**.

1 Reflecting the new legal, socio-economic, policy and geopolitical context

This section addresses how the significant changes since 2019 in the legislative, socio-economic and geopolitical framework for energy and climate policies affect the updates of the NECPs in terms of ambition and scope. This is complemented with a list of references in Table 1, summarising the main objectives, targets and contributions, and policies and measures needed to achieve them, put forward in the legislation, strategies and proposals. Member States are invited to reflect these references in their draft updated national plans. The final updated plans should reflect any new significant developments in a continuously changing legislative, socio-economic and geopolitical context, and must duly consider the Commission recommendations issued on the draft updated plans¹³.

¹¹ The five dimensions of the Energy Union, as referred to in Article 1(2) of Governance Regulation are closely related and mutually reinforcing: energy security, internal energy market, energy efficiency, decarbonisation and research, innovation and competitiveness

¹² See section 3.4

¹³ Pursuant to Article 9(2) of the Governance Regulation, the Commission will assess the draft updated NECPs no later than 6 months before the deadline for submitting the final plans.

1.1 Raising 2030 ambitions towards climate neutrality

The European Green Deal has provided strong momentum to increase the energy and climate ambition, while leaving no one behind. With the European Climate Law, the goals of reaching climate neutrality at EU level by 2050 and reducing net greenhouse gas emissions by 2030 by at least -55% compared to 1990 have become a legal obligation. These targets are substantially more stringent compared to those on which Member States based their initial NECPs¹⁴.

To deliver on the European Climate Law ambition, the Fit for 55 Package upgrades the 2030 framework for energy and climate. It will necessarily induce Member States to update the objectives and targets set out in their initial NECPs and the policies and measures for attaining them, particularly in the dimensions of decarbonisation (including renewable energy), energy efficiency, and the internal energy market.

In parallel, and to implement the increased ambition, key European energy and climate strategies have also been adopted, notably on energy system integration¹⁵, hydrogen¹⁶, offshore¹⁷, solar renewable energy,¹⁸ climate change adaptation¹⁹, sustainable carbon cycles²⁰, the EU Action plan for the digitalisation of the energy system²¹. Other relevant strategies, namely on zero pollution²² biodiversity²³, forests²⁴ and sustainable and smart mobility²⁵ have also been put forward by the Commission to help achieve the climate and energy objectives.

Earlier this year, the REPowerEU plan put forward specific measures to reduce the EU's energy dependence on Russian fossil fuels, and to speed up the implementation of the European Green Deal with new actions, while building on the Fit for 55 package. It aims at more affordable, secure and sustainable energy, to create a more resilient energy system and a true Energy Union. Under this plan, the Commission called on the co-legislators to increase the targets in the Energy Efficiency and Renewable Energy Directives. The implementation of the REPowerEU plan will accelerate the deployment of alternatives to natural gas and renewable sources, notably sustainable biomethane, renewable hydrogen, solar photovoltaics and offshore wind, and will trigger structural mid- to long-term energy efficiency measures.

¹⁴ Article 2(11) of the Governance Regulation.

¹⁵ Powering a climate-neutral economy: an EU Strategy for Energy System Integration, COM (2020) 2999 final.

¹⁶ A hydrogen Strategy for a climate-neutral Europe, COM (2020) 301

¹⁷ An EU Strategy to harness the potential of offshore renewable energy for a climate-neutral future, COM (2020) 741

¹⁸ An EU Solar Energy Strategy, COM 2022/221

¹⁹ Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change, COM (2021) 82 final.

²⁰ Sustainable Carbon Cycles, COM(2021) 800

²¹ Digitalising the energy system – EU Action plan COM (2022) 552

²² Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil', COM(2021) 400

²³ EU Biodiversity Strategy for 2030 Bringing nature back into our lives, COM(2020) 380

²⁴ New EU Forest Strategy for 2030, COM(2021) 572.

²⁵ Sustainable and Smart Mobility Strategy, COM(2020) 789 final.

The draft updated national plans should reflect this increase of ambition. Member States should fully embed the new and revised energy and climate targets included in the Fit for 55 and the REPowerEU proposals²⁶, even though the legislative process for adoption is not yet concluded. Member States should already consider the proposed increased national targets under the Effort Sharing Regulation (ESR) and the Land Use, Land Use Change and Forestry Regulation (LULUCF) where under both acts the co-legislators endorsed the ambition level proposed by the Commission. Member States should also consider the new targets under the recast Energy Efficiency Directive and the revised Renewable Energy Directive.

Since the initial NECPs were prepared, Member States also worked on their own national long-term strategies under the Governance Regulation. In line with the Governance Regulation, **the updated NECPs should be consistent with these long-term strategies, as well as with the climate-neutrality objective set out in the European Climate Law.**

The updated plans should also reflect the international developments related to the Paris Agreement, in particular the process set out by the Glasgow Climate Pact for raising mitigation ambition²⁷. This contains several decisions on energy and climate planning, including the phasing down of coal power, the phasing out of fossil fuel subsidies, and the consideration of further actions to reduce non-CO₂ emissions, including methane, by 2030.

1.2 Increase energy security and affordability, towards a more resilient Energy Union

The updated NECPs need to reinforce preparedness and strengthen measures in the EU that work towards collective energy security. The recent geopolitical situation has driven an unprecedented surge in wholesale and retail energy prices, with year-on-year changes peaking at 360% and 55% respectively (August 2022). This extreme volatility in the energy market concerns all Member States, affecting the purchasing power of households and the competitiveness of the economy. At the same time, the situation is increasing pressure on European energy security.

The updated national plans should reflect measures stemming from the REPowerEU plan that will deeply transform the energy system in the long run.

The new Regulation on gas storage²⁸ requires Member States to reinforce the planning of their energy security. Diversifying energy supplies by exploring new options for energy imports, including for nuclear fuels and substitute fossil fuels, is critical. Member States should integrate security of supply considerations when reflecting on the energy mix in their updated NECPs.

Member States are also encouraged to reflect progress and planning on the infrastructure projects that are identified as significant to meet the European Green

²⁶ Regulation (EU) 2022/1032.

²⁷ Decision 1/CMA.3.

²⁸ Regulation (EU) 2022/1032.

Deal and the REPowerEU objectives. The TEN-E²⁹ and the Projects of Common Interest (PCIs) have made our energy markets more secure, better integrated and more competitive. The 5th PCI list³⁰ and the limited additional infrastructure identified in Annex 3 of the REPowerEU plan, will help address the remaining bottlenecks in the grids and further diversify gas routes and resources, reinforce the onshore electricity grids and help pursue ambitious offshore renewable goals across all European sea basins. At the same time infrastructure projects should not lead to a lock-in of fossil fuels and stranded assets that inhibit the long-term transition to a climate-neutral economy.

In addition, Member States should use the full potential of the immediate response to the energy crisis to consolidate the energy security dimension of the national plans.

The updated NECPs should reflect the ‘Save Gas for a Safe Winter’ Communication³¹ and the Council Regulation on coordinated demand reduction measures for gas³², which set out measures to prepare for potential disruptions in the gas supply. These short-term measures are aimed at reinforcing the EU’s collective preparedness, in a spirit of solidarity. Measures adopted under this framework are interlinked with the REPowerEU plan, and in particular the EU Save Energy Communication.

The Commission also tabled immediate actions to address the surge in energy prices. On 6 October 2022, the Council adopted emergency measures to address high energy prices³³. Reducing electricity demand in peak hours, combined with adequate support for final consumers, resulting from the cap on revenues of inframarginal technologies and the solidarity contribution, will contribute to secure and more affordable energy for the coming months. On 18 October 2022, the Commission tabled further emergency proposals to curb the energy prices and to ensure more solidarity in preparedness³⁴.

Solidarity and collective actions are central to the NECPs, as they affect the energy security of each Member State, the energy affordability and, ultimately, the EU’s collective resilience.

The updated national plans should reflect how emergency measures to limit the impact of high energy prices are: (i) integrated into medium-term planning towards 2030 and (ii) consistent with all five dimensions of the Energy Union. While aiming to provide relief to end-consumers, these measures should be designed not to distort the longer term overarching objectives of the European Green Deal, including decarbonisation, zero pollution, biodiversity, resource efficiency and energy efficiency objectives. They also need

²⁹ Regulation (EU) 2022/869 of the European Parliament and of the Council on 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) n°715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) n°347/2013.

³⁰ Commission Delegated Regulation (EU) 2022/564 of 19 November 2021 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest.

³¹ Communication from the Commission to the European Parliament, the Council, the European Economic and social Committee, the Committee of the Regions “Save gas for a safe winter” COM (2022) 360 final

³² Council Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas

³³ Council Regulation (EU) 2022/1854 of 6 October on an emergency intervention to address high energy prices

³⁴ Proposal for a Council Regulation enhancing solidarity through better coordination of gas purchases, exchanges of gas across borders and reliable price benchmarks, COM(2022) 549 final.

to be fiscally sustainable and should not compromise security of supply and the level playing field in the internal energy market.

Member States should describe in their updated NECPs how they intend to bring the benefits of lower cost renewables and low carbon technologies to consumers. To fully decarbonise the electricity sector, Member States should investigate investment incentives in flexibility, (smart) grids, digital enabling solutions for the electricity grids, and firm capacity. It also appears relevant to ensure more liquid forward markets, and better protect consumers against excessive price volatility, high prices and excessive risk taking by suppliers. The NECPs should also explore how to improve the efficiency of cross-border trade, while ensuring that all forms of electricity can be freely traded between Member States. In parallel, the Commission is engaging urgently in a deep and comprehensive reform of the electricity market design.

Member States are invited to make the best use of the integrated approach of the national plans, and fully explore synergies across the relevant dimensions in the plans. For instance, rapid progress on storage, diversification of energy supply and demand response will increase energy security and help speed up the roll-out of renewable energy, increase energy efficiency in the overall energy system and improve the integration of the internal energy market.

Where relevant regional cooperation and relevant forum must be fully mobilised to develop collective action and solidarity mechanisms that will ensure alternative supplies, prevent disruptions and increase preparedness and resilience.

Finally, in line with the REPowerEU plan, the updated national plans should reflect the EU external energy engagement³⁵. Member States should refer to relevant initiatives or projects which have been undertaken or implemented in line with the Global Gateway strategy³⁶.

Box 2: Using the springboard of the European Semester

The Governance Regulation requires Member States to take into consideration the latest country-specific recommendations issued in the context of the European Semester³⁷. The 2022 European Semester Country reports²¹ identify key outstanding or newly emerging macro-economic challenges, not sufficiently covered by commitments undertaken in the Recovery and Resilience Plans (RRPs).

The 2022 country-specific recommendations for each Member State focus on those structural challenges, including for implementing the REPowerEU plan, with due attention to the social fairness of the clean energy transition³⁸. In the area of energy and climate policy, these recommendations aim first and foremost at reducing dependency on Russian fossil fuels and further decarbonising the economy. They call for accelerating the deployment of renewable energy and the necessary infrastructure, supporting the necessary reskilling and upskilling of the workforce, tackling labour and skills gaps, increasing energy

³⁵ EU external energy engagement in a changing world, JOIN (2022) 23 final.

³⁶ The Global Gateway, JOIN (2021) 30 final.

³⁷ Article 14(5) of Regulation (EU) 2018/1999.

³⁸ See Annex 8 of the 2022 Semester Country Reports.

efficiency and increasing the capacity of interconnections across the EU. For a considerable number of Member States, the recommendations are also related to sustainable mobility, while for a few Member States the recommendations relate to environmental aspects, such as circular economy.

In updating their NECPs, Member States shall take full account of the 2022 and 2023 country-specific recommendations issued under the European Semester. They should also include information on how relevant policies and measures in each dimension of the updated national plans contribute towards the fulfilment of the energy and climate country-specific recommendations.

1.3 Ensure a fair and just transition

1.3.1 Mitigating the social and employment impacts and delivering on a just and fair energy and climate transition

The updated NECPs should reflect better the socio-economic impacts than the initial national plans. Fairness and solidarity are key objectives and an integral part of the European Green Deal, which recognises that no person and no place should be left behind. Addressing from the outset the socio-economic impacts of the energy and climate transition and protecting households, exposed industries and workers throughout the process is a prerequisite for tackling the current energy crisis and paving the way for a fair transition.

The Council Recommendation on ensuring a fair transition towards climate neutrality outlines policy packages to support a fair green transition, and invites Member States to fully take it into consideration for the process of updating their NECPs³⁹. In particular, Member States should develop clear strategies identifying and measuring the social, employment and skills consequences (or any other distributional impacts) of the energy and climate transition and give proper consideration on how to effectively address these challenges. The updated national plans should clearly prioritise funding for a fair transition, for reskilling and upskilling, and for supporting labour market adjustments.

The development and implementation of policies and measures should follow both a whole-of-society approach and a granular approach that focuses on the most affected regions, industries, and population groups, especially those already in vulnerable situations.

Box 3: Key fair transition policies and measures for updated NECPs

- promote energy efficiency improvements, including in the affordable social housing sector; provide financial incentives and advice to individuals, paying due attention to split incentives among owners and tenants and to the evolution of housing costs;

³⁹ Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality, 2022/C243/04.

- provide tailored information and advice to all consumers, and especially vulnerable households, including by using digital tools, on how to reduce energy demand and lower their energy bills. Target energy savings measures towards consumption and production activities with high energy demand;
- empower energy consumers by facilitating access to energy from renewable sources, by simplifying permitting procedures and further developing self-supply via citizen and renewable energy communities, accompanied by campaigns, with a special focus on vulnerable groups and consumers living in rural and remote areas (e.g. EU outermost regions⁴⁰);
- prevent challenges to sustainable transport, including affordability for vulnerable households, through direct support measures and by developing the necessary infrastructure;
- support access to quality employment, in particular through public employment services, tailored job search assistance and other active labour market policy measures (e.g., learning courses, hiring and transition incentives, targeted and time-bound employment programmes, support schemes for apprenticeships and quality traineeships);
- promote job creation and entrepreneurship in green activities, for instance through financial and non-financial measures, ensuring accessible support for underrepresented and vulnerable groups and encouraging the promotion of green award criteria for entrepreneurs;
- equip people with the right skills to access quality jobs and tackle labour shortages for the green and digital transitions, by promoting (1) inclusive education and training, in line with skills forecasts and through stakeholder partnerships, as the Pact for Skills⁴¹; (2) schemes for apprenticeships, paid traineeships and job shadowing schemes; (3) adult training for upskilling and reskilling, for instance through individual learning accounts⁴², widely recognised courses or joining the EU Pact for Skills⁴³;
- ensure balanced and equal access to education and job opportunities at all levels and in all sectors, for instance by reducing the current gender imbalance that has so far characterised STEM students and the energy sector;
- ensure fair tax-benefit systems and social protection to support the most affected people and households, in particular those in vulnerable situations, including through (1) targeted and temporary direct income support to complement investment measures, (2) shifting the tax burden away from labour incomes towards green objectives and (3) providing innovative job-to-job transition schemes to ensure income security during labour market transitions.

1.3.2 Addressing the pressing challenges of energy poverty

⁴⁰ The EU counts nine outermost regions located in the western Atlantic Ocean, the Caribbean basin, the Amazonian forest and the Indian Ocean. In total, they are home to 4.8 million citizens. The outermost regions are islands, archipelagos and one land territory (French Guiana) and are not part of the European continental grid. Pursuant to Art. 5(1)(e)(iv) of the Governance Regulation, Member States should take account of geographical, environmental and natural constraints, including those of non-interconnected areas and regions in setting renewable energy targets.

⁴¹ https://pact-for-skills.ec.europa.eu/index_en.

⁴² Council Recommendation on individual learning accounts.

⁴³ See also JRC Report, Czako V. Skills for the clean energy transition, Publication Office for the European Union, Luxembourg, 2022, JRC129676.

Affordability is a priority of the Energy Union, and it should be reflected in the updated NECPs. All Member States are encouraged to set a clear, specific, attainable, measurable and time-bound objective for reducing energy poverty. Member States shall assess the number of households in energy poverty⁴⁴. The Commission's recommendation on energy poverty⁴⁵ provides guidance on suitable indicators for its measurement. Explanation on how this definition and indicators are used and on how the data on energy poverty is collected, including at national and local level, is encouraged.

The updated NECPs should take account of the latest legislative developments, especially the proposed definition of energy poverty in the Energy Efficiency Directive and the proposed Social Climate Fund, and the above-mentioned Council Recommendation on ensuring a fair transition towards climate neutrality.

Based on such an assessment, if a Member State finds that a significant number of households are in energy poverty, it must include in its updated national plan a national indicative objective for reducing energy poverty, including a timeframe by when the objectives are to be met.⁴⁶ However, considering the current spike in energy prices, *all* Member States are encouraged to set an objective for reducing energy poverty. If an objective is not considered necessary, Member States should justify this decision and determine the minimum number of households that would qualify as "significant" in this context. Additionally, the national plans should outline the policies and measures addressing energy poverty, including social policy measures and other relevant national programmes. Member States should outline how the objective was determined, and, to account for the current energy price spike, they should use the latest available data.

2 Thematic issues

2.1 Boost the clean energy transition

The established energy governance framework has proven positive, as the EU energy efficiency and renewable energy targets for 2020 were overachieved. The rapid and imperative substitution of Russian fossil fuels will require a massive scale-up in the clean energy transition, giving priority to structural measures for energy efficiency and building on a strong boost to the roll-out of renewable energy. Moreover, the deployment of digital solutions for energy will play an important role in supporting the transformation of the energy sector; fostering cooperation between energy and digital players and creating synergies between the energy and digital agenda is instrumental to achieve the climate objective. The potential of the governance mechanism needs to be fully mobilised while updating the national plans in that direction.

2.1.1 Accelerating the roll-out of renewable energy and hydrogen

Updated NECPs should align with the increased ambition proposed in the revised Renewable Energy Directive by providing a national contribution towards the binding overall EU target. The national plans should also include sectorial contributions commensurate with this overall target, and meeting the sub-targets for the transport sector,

⁴⁴ Article 3(3)(d) of the Governance Regulation.

⁴⁵ Commission Recommendation (EU) 2020/1563 of 14 October 2020 on energy poverty (C/2020/9600).

⁴⁶ Article 3(3)(d) of Governance Regulation.

district heating and cooling and the industry and buildings sectors. Accelerated and massive take-up of renewables across the EU is necessary in order to make a decisive contribution to the EU ambition of phasing out fossil fuels from Russia and achieving the climate neutrality objective.

In line with the REPowerEU plan, particular attention should be given to natural gas substitution by scaling up sustainable biomethane production (i.e., mainly based on organic waste and forest and agricultural residues) **and accelerating the deployment of renewable hydrogen in the hard-to-decarbonise sectors of transport and industry.**

The updated NECPs should reflect the deployment of the necessary infrastructure and incentives, in line with the REPowerEU target of 10 million tonnes of domestic renewable hydrogen and 35 bcm of sustainable biomethane production by 2030. Furthermore, the pathway for oil-based transport fuel substitution through electrification and renewable hydrogen in land transport should be described. In line with the objective of 10 million tonnes of imported hydrogen by 2030, the updated national plans should also reflect initiatives or actions that have been undertaken or are planned, or international partnerships which will or have been established, with the aim to facilitate imports of renewable hydrogen.

In their updated NECPs, **Member States are also encouraged to integrate a component on sustainable biogas and biomethane production and use,** assessing the national potentials and defining trajectories to reach those by 2030 and 2050⁴⁷.

A comprehensive framework of policies and measures promoting the deployment of renewables across all relevant sectors of the economy is needed. The faster roll-out of renewables is particularly relevant for sectors where progress has been slower so far (such as transport, buildings and industry, especially in hard-to-abate industrial sectors). The focus should be on promoting the uptake of electrification, renewable technologies (including renewable hydrogen in industrial sectors) energy storage, and demand response adding flexibility to the energy system and facilitating system integration for renewables.

A particular challenge to developing and deploying most renewable energy projects that needs to be addressed by the NECPs concerns permitting. In this respect, Member States should align their national policies and measures with the proposal to amend the Renewable Energy Directive⁴⁸ from May 2022, the EU solar strategy and the associated Recommendation on speeding up permit-granting procedures for renewable energy projects⁴⁹.

While updating their national plans, Member States should also develop measures to facilitate power purchase agreements and guarantees of origin. Policies should also address the roll-out of renewable solutions in buildings, following the proposal of recast of

⁴⁷ Implementing the Repower EU Action Plan: investment needs, hydrogen accelerator and achieving the biomethane targets, SWD(2022) 230 final, p. 35.

⁴⁸ Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, COM/2022/222 final

⁴⁹ EU Solar Strategy COM/2022/221 final, Guidance to Member States on good practices to speed up permit-granting procedures for renewable energy projects and on facilitating Power Purchase Agreements SWD/2022/0149 final.

the Energy Performance of Buildings Directive, particularly in relation to heating (e.g., heat pumps) and solar on rooftops, in line with the REPowerEU ambition.

2.1.2 Building on structural energy efficiency measures

Energy efficiency measures can often be the cheapest, safest and cleanest way to reduce our reliance on fossil fuel imports from Russia and ensure a fair path towards the clean energy transition. Moreover, using less energy supports security of supply and energy storage, helps reducing energy poverty, and increases competitiveness in the global landscape.

The updated NECPs should align with the increased ambition proposed in the recast of the Energy Efficiency Directive, by providing a national contribution towards the overall EU binding target and the energy consumption shares of end-use sectors. The updated national plans should also include details on the calculation and methodology of the energy savings obligation, and the required information on the total floor area to be renovated or equivalent annual energy savings for public buildings.

Policies, measures and programmes on energy efficiency in the updated national plans should encompass all energy demand sectors, including buildings (residential and tertiary), industry and transport. The energy efficiency first principle⁵⁰ should be used as an overarching principle and its application should be explained. Additionally, the calculation methodology and the underlying data for calculating the Primary Energy Factor should be provided.

As regards buildings, the updated NECPs should be aligned with the updated and increased ambition and requirements in the Energy Performance of Buildings Directive proposal, and the increased efforts in the energy renovation of buildings, with the objective to double renovation rates (Renovation Wave⁵¹). The updated NECPs, following the commitments in the national long term renovation strategies, should include the measures taken to progressively decarbonise the building stock, including the supportive financial and technical assistance measures, which are also related to the availability of a skilled workforce.

In line with REPowerEU and the EU Save Energy Communication⁵², Member States should include information on their contributions and how they are implementing REPowerEU by including measures on behavioural change, communication campaigns and fiscal measures implemented or planned to encourage energy savings.

2.1.3. Exploring the full potential of the twin green and digital transition

A deep digital transformation of the EU energy system is also one of the crucial elements to deliver on the REPowerEU and on the European Green Deal objectives.

⁵⁰ Article 2 (18) of the Governance Regulation.

⁵¹ Renovation wave communication, COM 2020 662 final.

⁵² Communication from the Commission to the European Parliament, the Council, the European Economic and social Committee and the Committee of the Regions EU 'Save Energy' COM/2022/240 final

Energy and resource efficiency, decarbonisation, electrification, sector integration and decentralisation of the energy system all require a tremendous effort in digitalisation.

Members States are invited to identify synergies between energy and digital national activities, targets and objectives, and to reflect on how to further exploit them through policies and measures in line with the “Digitalising the energy system - EU action plan”⁵³. Digitalisation will be key for enhance the consumer engagement and the development of an electricity infrastructure that is fit for the future energy system. Investing in the digitalisation of the electricity grid will also allow for a cost-effective transformation of the energy system.

Building on the experience of their Recovery and Resilience Plans, **Member States are also encouraged to seek synergies between the NECPs and the national Digital Decade strategic roadmaps** submitted under the Digital Decade Policy Programme 2030 (DDPP)⁵⁴, to ensure that digital infrastructure and technologies contribute to a sustainable circular and climate-neutral economy and society in line with the European Green Deal. **Member States are invited to reflect on how they will leverage the Digital Decade process and tools, and in particular multi-country projects, to accelerate the green transition.**

2.2 Integrate the imperatives of climate adaptation

The frequency and severity of weather extremes is increasing. Since the preparation of the initial NECPs, the importance of climate adaptation has been increasingly recognised globally⁵⁵. In 2021, the Commission published a new EU strategy on adaptation to climate change, which underlined the importance of integrating climate resilience in national fiscal frameworks, and of nature-based solutions. The European Climate Law stresses the importance of sectoral measures being resilient to the potential adverse impacts of the changing climate⁵⁶.

Member States are invited to set out adaptation goals in their updated national plans to support the achievement of national objectives, targets and contributions under the Energy Union⁵⁷, in line with the EU Adaptation Strategy. Climate change related risks must be integrated into investment and planning decisions, and increase Member States’ adaptive capacity, strengthen resilience and reduce vulnerability to climate change. Importantly, adaptation action, if properly designed, can also bring climate mitigation co-benefits, and improve social and economic resilience in a fair manner, considering the uneven regional and societal impacts of climate change and weather extremes. Mitigation investment needs to be climate-proof.

⁵³ Digitalising the energy system – EU Action plan COM (2022) 552

⁵⁴ Proposal for a Decision of the European Parliament and of the Council establishing the 2030 Policy Programme “Path to the Digital Decade”, COM/2021/574 final

⁵⁵ For example, at the UN Climate Summit, the Global Adaptation Summit and different COPs of the UNFCCC and Paris Agreement.

⁵⁶ Under Article 5 of the European Climate Law, Member States must ensure that policies on climate adaptation are coherent, mutually supportive and provide co-benefits for sectoral policies, and work towards better integration of adaptation to climate change in a consistent manner in all policy areas.

⁵⁷ Article 4(a)(1)(iii) and Annex I of Governance Regulation.

The adaptation goals should be quantified where possible and clearly linked to the specific Energy Union objectives and policies they support. References to the national adaptation strategy or plan could be included in the relevant sections of the policies and measures chapter in the updated NECPs. For example, updated NECPs could set out which measures will safeguard the carbon sequestration potential of land use (decarbonisation dimension), electricity generation capacity (energy security dimension), or residential energy savings (energy efficiency dimension) in the face of water stress and scarcity, droughts, floods forest fires or heatwaves. The planned and implemented nature-based solutions can be described, together with their actual or expected impacts in terms of climate adaptation (e.g., protection against desertification, urban heat, floods, etc.). A particular emphasis should be placed on water, notably on the resilience of energy systems to structural or seasonal water scarcity. Innovative approaches such as insurance policies and fiscal measures addressing the climate protection gap, may also be considered, as well as investments aimed at preserving biodiversity that would contribute to climate adaptation.

2.3 Improve the planning for land-use, forestry and agriculture sectors

The land-use, forestry and agriculture sectors will play a crucial role in achieving the EU's climate-neutrality and adaptation objectives, through significant reductions of greenhouse gas emissions, enhanced carbon removals and ecosystem services to improve resilience. The EU carbon sink has been steadily declining. The drivers include an increase in wood demand, forests reaching harvest maturity, and an increase in forest disturbances. At the same time, the progress on emissions reduction in the EU agriculture sector has stagnated despite increased support for climate action. Key sources of greenhouse gas emissions in the agriculture sector are methane emissions from livestock - both from enteric fermentation and manure management- and nitrous oxide emissions due to the use of chemical fertilisers and manure management.

As outlined in section 1.1, **the updated NECPs should reflect the increased ambition proposed for the revision of the LULUCF Regulation by setting out the pathway towards the national targets.** The national plans should indicate how they intend to increase the contribution of their land-use, forestry and agriculture sectors to the EU's enhanced climate target, through policies and measures and enhanced ambition. Member States should better integrate mitigation, adaptation and nature restoration measures in their land-use, forestry and agriculture sectors in a context with related initiatives for biodiversity and bioenergy. Most recently, the proposal for a Nature Restoration Law⁵⁸ also addresses aspects of land management pertinent for climate change mitigation and adaptation.

Policies and measures should reflect raised ambition regarding climate change adaptation and mitigation, covering CO₂ and non-CO₂ emissions and carbon removals in relation to energy efficiency, renewable energy production and use, and preservation, protection and restoration of ecosystems.

Box 4: Content of the updated NECPs related to LULUCF. Planning and quantifying the following activities:

⁵⁸ Proposal for a Regulation of the European Parliament and of the Council on nature restoration COM (2022) 304 final.

- Identification of the improvements for the system of information collection and monitoring needed for effective policy choices, design and implementation in the land use, forestry and agriculture sectors (e.g., through satellite images). The system should include the need to ensure the effective implementation with respect to the objectives of protecting and restoring ecosystems;
- Reducing greenhouse gas emissions in the agriculture non-CO₂ sector, including as regards enteric fermentation, manure management and fertiliser management;
- Increasing net removals in the land-use, forestry and agriculture sectors including through carbon farming, and long-lasting carbon storing materials (such as wood-based construction products), with a focus on integrated approaches such as nature-based solutions in order to also contribute to the objectives of ecosystems protection and restoration, as well as other environmental objectives (e.g., biodiversity, zero pollution, stopping natural resources depletion);
- Promoting and implementing energy efficiency measures related to biomass, including the supply of bio-based insulating materials.

2.4 Tackling methane emissions

The Commission encourages Member States to set out sectoral objectives and targets to reduce methane emissions and corresponding policies and measures in their updated NECPs, considering the objectives of the EU methane strategy⁵⁹.

Reducing methane emissions contributes directly to slowing down the rate of warming. Moreover, as methane is a precursor of ozone, its reduction also decreases air pollution. Methane has a global warming potential that is 28 times larger than CO₂ over a 100-year timeframe. In the EU, more than half of anthropogenic methane emissions come from agriculture, with the livestock responsible for 54% of total EU methane emissions (over 6% of total EU GHG emissions)⁶⁰. Around a fourth of methane emissions come instead from solid waste and wastewater, and almost a fifth from energy.

Methane is covered by the Effort Sharing Regulation⁶¹, which gives Member States flexibility to choose the appropriate policies to mitigate methane emissions. In addition, the EU has several sectoral policies that help reducing methane emissions⁶², such as the Common Agriculture Policy, the Landfill Directive and the proposed as well as planned revisions of the Industrial Emissions Directive, the Urban Waste Water Treatment Directive, and the Renewable Energy Directive, and the new proposed Regulation on methane reductions in the energy sector.

Box 5: Examples of policies and measures to reduce methane emissions:

⁵⁹ EU Methane strategy COM (2020) 663 final.

⁶⁰ European Environmental Agency.

⁶¹ Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement.

⁶² Such as the Common Agriculture Policy, the Landfill Directive and the proposed as well as planned revisions of the Industrial Emissions Directive, the Urban Waste Water Treatment Directive, and the Renewable Energy Directive.

- **Agriculture** - introduce incentives for breeding that improve health and fertility, feed management and feed additives to mitigate methane from enteric fermentation while preventing trade-offs with other environmental issues, such as ammonia emissions; promote manure storage techniques (e.g., cooling slurry, slurry acidification, covering manure and slurry stores, introducing emission limit values and monitoring requirements) and anaerobic digestion with biogas recovery to mitigate methane from manure management, with the additional benefit of reducing dependence on natural gas imports and preventing ammonia emissions; promote more sustainable diets with less red and processed meat and more plant-based protein sources.
- **Solid waste and wastewater** - reduce landfilling of organic waste through a full and swift implementation of the waste and landfill legislation; source separation and anaerobic digestion with biogas recovery, to mitigate methane from solid waste; anaerobic digestion of sludge with biogas recovery, to mitigate methane from wastewater.
- **Energy** – in line with the proposed Regulation on methane emissions reductions⁶³, the measurement, reporting and verification of methane emissions in the energy sector need to be improved and emissions need to be mitigated through mandatory leak detection and repair, and a ban on venting and flaring.

2.5 Integrating long-term geological storage of CO₂

Member States are encouraged to include in their updated NECPs the efforts planned to enable their industries to capture and store their inherent process emissions permanently in geological storage sites, in accordance with Directive 2009/31/EC. Reaching the climate-neutrality objective requires that EU-wide remaining greenhouse gas emissions and removals from hard-to-abate sectors are balanced within the EU at the latest by 2050 and that the EU achieves negative emissions thereafter.

Several activities, including energy intensive industries, such as cement, iron and steel, aluminium, pulp and paper and refineries, as well as agriculture, have inherent process emissions resulting from the production processes themselves. Carbon capture and storage, or carbon capture and use can provide a key contribution to tackling these sectors' emissions.

Furthermore, it can help remove CO₂ from the atmosphere through carbon removals such as bioenergy coupled with carbon capture and storage (BECCS) and through Direct Atmospheric Carbon Capture (DACCS). BECCS deployment should be approached in the updated NECPs in full consideration of the limits and availability of sustainable biomass.

Box 6: Setting objectives, targets and contributions for carbon capture and storage.

Member States are encouraged to provide the following information:

- the annual aggregated projection of inherent process emissions that will have to be abated through CO₂ capture;
- the annual biogenic and direct air CO₂ that will be available for geological storage of CO₂;
- the geological CO₂ storage capacity that can be made operationally available annually;

⁶³Proposal for a Regulation of the European Parliament and of the Council on methane emissions reduction in the energy sector and amending Regulation (EU) 2019/942 COM(2021) 805 final.

- annual CO₂ storage capacity that may become available at the end of exploitation of hydrocarbon reservoirs;
- planned CO₂ transport infrastructure;
- public funding support available for investment in CO₂ capture, transport and storage;
- any other measures to support the deployment of long-term geological CO₂ storage opportunities.

2.6 Promoting the research, innovation and competitiveness dimension

Building on the 2020 assessment of the initial NECPs⁶⁴ and considering the current geopolitical circumstances and the recent policy developments, Member States are invited to strengthen the research innovation and competitiveness dimension in their updated plans.

A successful research and innovation (R&I) pathway in clean energy and low carbon technologies requires sufficient experts and entrepreneurs, supported by the synergistic use of EU, national and regional programmes. Clear national R&I targets and objectives to 2030 (and where appropriate 2050), increased cooperation between Member States and a continuous monitoring of national R&I activities are crucial to reinforce the EU competitiveness and to deliver on the Green Deal objectives. These elements are also of the essence to bridge the gap between R&I and market uptake, to reinforce EU competitiveness, and eventually lead to an accelerated roll-out of technologies expected to impact on the Green Deal objectives. R&I strategies should also embrace and nurture non-technological, transdisciplinary aspects that are critically important for accelerating the ecological and energy transitions; stimulating behavioural change, climate-conscious lifestyle choices, promoting institutional, governance and policy innovations to create enabling conditions for a climate-neutral transformation.

The updated national plans should describe Member States' objectives and policies to facilitate the manufacturing scale-up of commercially available low-carbon technologies, equipment and components (for instance by reflecting the current situation and trends for investments, value added) within their territory – as well as their objectives and policies to achieve this through diversification efforts in third countries. The REPowerEU plan specifies that its achievement requires diversifying the supply of renewable energy equipment and of critical raw materials, reducing sectoral dependencies, overcoming supply chain bottlenecks, and expanding the EU's clean energy technology manufacturing capacity. The updated NECPs should better reflect the needs related to manufacturing capacities and industrial value chains in key low-carbon energy technologies.

Box 7: Best practice for improving the research, innovation and competitiveness dimension

⁶⁴ An EU-wide assessment of the National Energy and Climate Plans Driving forward the green transition and promoting economic recovery through integrated energy and climate planning.

- Identify and describe clean energy R&I needs for delivering on energy and climate objectives, including environmental impacts and just transition aspects⁶⁵ and the assessment of socio-economic impacts of the green transition.
- Describe national R&I objectives and funding targets that show concrete and quantitative pathways to deliver on the 2030 and 2050 objectives for specific key clean energy technologies and carbon capture and storage.
- Integrate the industrial steps of clean energy value chains, for instance by addressing manufacturing capacities for renewable energy technologies, thus also supporting the competitiveness of the European industry.
- Explore synergies between relevant national funds and activities, with Innovation Platforms and with the Strategic Energy Technology (SET) Plan Implementation Working Groups and where appropriate with the four EU Green Deal Missions⁶⁶
- Improve cooperation between the SET plan countries, especially but not exclusively through the Horizon Europe Clean Energy Transition Partnership.
- Describe how to enhance cooperation with global partners on clean energy R&I
- Improve support and access to finance for business innovation including start-ups, scale-ups and SMEs.
- Integrate the manufacturing scale-up and diversified production capacity of clean energy and low carbon technology value chains in national objectives and policies and measures as regards competitiveness.
- Integrate skills development required for the clean energy transition, connecting for instance with the Pact for Skills on renewable energy.
- Integrate the notions of recyclability and circularity and the need to reduce dependency, and effectively diversifying the sourcing of on imported raw materials, components required to manufacture clean energy technologies.
- Identify and describe how to improve competitiveness of clean energy technologies in the global market, including main drivers and challenges both in the internal and global markets.

2.7 Integrating the climate-neutrality objective

Member States are required to include in their updated NECPs elements that enhance coherence and consistency with the EU's climate-neutrality objective, building on their national long-term strategies. To ensure consistency and coherence with the EU's climate-neutrality objective, the European Climate Law amended the Governance Regulation to include the climate-neutrality objective in the relevant provisions of the Governance Regulation⁶⁷. Elements where Member States can improve coherence and consistency include:

- In their assessment of the impacts of the planned policies and measures, by analysing the consistency with the EU's climate-neutrality objective set out in Article 2(1) of the Climate Law (Art. 3(2)(f) Governance Regulation);
- In the analytical basis for the plan, by describing the way existing policies and measures and planned policies and measures contribute to the achievement of the EU's climate-

⁶⁵ See the Council Recommendation on ensuring a fair transition towards climate neutrality, 2022/C 243/04.

⁶⁶ Adaptation to Climate Change, Restore our Ocean and Waters, Climate-Neutral and Smart Cities, A Soil Deal for Europe.

⁶⁷ Article 13 of the European Climate Law.

neutrality objective, as set out in Article 2(1) of the Climate Law (Art. 8(2)(e) Governance Regulation, and Annex 1, Part 1, Section B, point 5.5 Governance Regulation);

- When setting out the policies and measures related to greenhouse gas emissions and removals, by providing an outlook towards the EU's climate-neutrality objective (Annex I, Part 1, Section A, point 3.1.1.i Governance Regulation).

3 Cross-cutting points for attention when updating the NECPs

3.1 *Building on lessons learnt from the initial NECPs*

The initial national energy and climate plans submitted by Member States lay the foundation for stepping up the ambitions and achieving the objectives of the European Green Deal and the REPowerEU plan. Their preparation followed the iterative process set out in the Governance Regulation, building on extensive consultations between the Commission and Member States as well as consultations with stakeholders and civil society. The Commission assessed the first draft plans individually and at EU-level⁶⁸ and issued recommendations to the Member States⁶⁹ for finalising the plans. The final plans were submitted, albeit some with delays, by 31 December 2019, and the Commission assessed the final plans individually and in aggregate⁷⁰.

3.1.1 *Improving national energy and climate plans to 2030*

The ‘whole of government approach’ is a central part of the initial plans’ preparation and one of the leading principles of the Governance Regulation. It helps improve consistency across the Energy Union’s five dimensions and create synergies between different policy areas.

Member States are invited to reach out to all relevant authorities and stakeholders when preparing the update of their integrated draft and final national plans. These relevant authorities should work together across their different portfolios to update the national plans and achieve the shared goals of the Energy Union, the European Green Deal, the European Semester, the Recovery and Resilience Facility, the REPowerEU plan and other developments in the EU energy and climate policies. Such a process should ensure that the authorities take ownership of implementing the integrated national plans.

Member States are encouraged to build on their initial national plans while fully considering the related assessment carried out by the Commission.

⁶⁸ COM (2019) 285 United in delivering the Energy Union and Climate Action – Setting the foundations for a successful clean energy transition. See also Economidou, M., Ringel, M., Valentova, M., Zancanella, P., Tsemekidi Tzeiranak, S., Zangheri, P., Paci, D., Ribeiro Serrenho, T., Palermo, V. and Bertoldi, P., National Energy and Climate Plans for 2021-2030 under the EU Energy Union, EUR 30487 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-27013-3, doi:10.2760/678371, JRC122862.

⁶⁹ [National energy and climate plans | European Commission \(europa.eu\)](https://ec.europa.eu/energy/en/national-energy-and-climate-plans).

⁷⁰ COM (2020)564 An EU-Wide assessment of National Energy and Climate Plans - Driving forward the green transition and promoting economic recovery through integrated energy and climate planning.

3.1.2 Synergies with integrated progress reports

Member States are encouraged to use the first integrated national energy and climate progress reports (NECPRs) when preparing their updated NECPs. The reports can be used to: (i) help describe the current situation, including on adaptation to climate change; (ii) estimate remaining gaps to achieve the objectives, targets and contributions set out in the first national plans; and (iii) draw conclusions on the adequacy of policies and measures and investments the NECPRs contain in each dimension and sector, including their impact on air quality and emissions of air pollutants.

By 15 March 2023, Member States will, for the first time, submit NECPRs to the Commission⁷¹. Reporting and monitoring progress are two of the main features of the Governance Regulation. NECPRs will contribute to an evidence-based assessment of progress in implementing the initial NECPs and are thereby a valuable way to identify potential areas for improvement. The format of the progress reporting and monitoring was developed to analyse implementation of the energy and climate policies in the NECPs, bearing in mind to limit the administrative burden for Member States and the Commission.

The analytical part of updated national plans, as well as planned policies and measures, may benefit from the information collected for reporting on progress. However, if referring to electricity and gas markets, energy prices and the breakdown of current price elements (in energy, network, taxes/levies price components), Member States should provide an updated analysis compared to the time of submitting the NECPRs.

3.2 An early and inclusive public participation in line with the Aarhus Convention

As was the case for the initial plans, Member States must develop the update of the NECPs in a dialogue with local authorities, civil society organisations, social partners, the sectoral business community, investors and other stakeholders. Article 10 of the Governance Regulation requires Member States to give the public early and effective opportunities to participate in the elaboration of the NECPs. Member States are parties to the Aarhus Convention⁷² and so, they are obliged to ensure that the public is given early and effective opportunities to participate in preparing the draft updated national plans in a transparent and fair framework⁷³. In particular, the public must be given reasonable time to participate in the different phases and must be consulted when all options are still open⁷⁴. Sound consultation implies that the public should have access to all relevant documents, reports and assumptions at the start of the consultation period. Member States are invited to reflect on best practices, such as setting up the consultation through a dedicated NECP website, which contains all the information.

Under Article 11 of the Governance Regulation, Member States must establish a multilevel energy and climate dialogue. They must provide a platform to discuss with stakeholders the different scenarios envisaged for energy and climate policies and achieving

⁷¹ Pursuant to Articles 17 to 25 of the Governance Regulation.

⁷² [Aarhus \(europa.eu\)](https://european-council.europa.eu/media/e3b09c4e-9f96-47d7-97d3-1f310f9e6db7/policy-communication-service/document/17402_en20.pdf).

⁷³ Article 6 of the Aarhus Convention.

⁷⁴ Article 7 of the Aarhus Convention.

the EU's climate-neutrality objective set out in the Climate Law⁷⁵. Member States will report on the progress in establishing this dialogue in the NECPRs. For public consultations, Member States are encouraged to strengthen the multilevel dialogue and work with regional and local individuals and groups who can bring forward concrete measures. They should also explore synergies with existing forums, such as the EU Covenant of Mayors. Member States also need to ensure full and timely consultation and involvement of social partners, in accordance with the relevant national rules and practices. Social dialogue and a whole-of-society approach are key for developing and implementing effective energy and climate policies in line with the principles of the European Pillar of Social Rights.

In the updated NECPs, Member States are required to include a summary of the consultations and of the public's view or provisional views. Member States should explain how the views of the public were considered ahead of submitting the draft and final national plans. Member States are also expected to describe how the process allowed the public to participate transparently and fairly.

3.3 Strengthen regional cooperation for a better coordinated response and promotion of solidarity

Member States are encouraged to strengthen regional cooperation when preparing the updated national plans. To the extent possible, it is recommended to coordinate such cooperation through established regional cooperation forum. Regional groups set up under the EU Energy Platform⁷⁶, as well as regional risk groups linked to the security of gas supply on the EU market may also provide support where needed. Even though the governance mechanism has been designed to stimulate cooperation between Member States at cross-border and regional levels⁷⁷, Member States did not seize the full potential of regional cooperation during the preparation of the initial NECPs.

Member States are also encouraged to engage voluntarily in joint drafting of parts of their NECPs, both at territorial and sectoral level. This is the opportunity to alleviate the administrative burden on Member States and improve the content of the NECPs. The Commission is ready to facilitate this cooperation if Member States request it during the preparation of the draft updated NECPs. Regional cooperation on energy and climate policies enables exploring synergies to efficiently reach national energy and climate objectives, ensuring plans are more consistent. Areas for coordination can include, for instance, joint projects or support schemes for renewables (e.g., consistent timeframes and measures for setting up the establishment of a joint scheme) and consistent approaches in developing renewable energy within a region or cooperation within the SET Plan framework.

Member States are invited to summarise the outcome of regional consultations in their draft updated national plans, including comments from other Member States, and explain how such comments have been considered.

⁷⁵ The NECPlatform project funded under the LIFE Program aims at supporting six EU Member States (Bulgaria, Croatia, France, Italy, Portugal and Romania) in setting-up and managing permanent multi-level Climate and Energy Dialogue (CED) Platforms, helping them comply with Article 11 of the Governance Regulation by fostering vertical and horizontal integration of energy and climate policies., more info: [Funding & tenders \(europa.eu\)](#)

⁷⁶ [EU Energy Platform \(europa.eu\)](#) .

⁷⁷ Article 12 of the Governance Regulation.

Member States are also invited to involve regional partners to ensure consistent planning and address risks related to security of supply. This is also important to ensure the deployment of sufficient electricity infrastructure and energy transmission infrastructure (physical dimension), as well as to foster market integration. Recent energy policy developments have demonstrated the need for regional cooperation to boost the resilience and preparedness of the energy system and speed up the clean energy transition. Today, more than ever, regional cooperation and European solidarity are the strongest EU asset to achieve a diversified energy supply, strengthen the energy security dimension of the NECPs, and ultimately achieve a more resilient Energy Union. To facilitate regional cooperation, the Commission is publishing specific guidance on cost-benefit sharing in renewable energy cooperation projects.

The Commission invites Member States to summarise their participation in the EU Energy Platform in their draft updated national plans, and possible action resulting from this work. The EU Energy Platform was created to coordinate the work to diversify EU gas supplies away from Russian sources. This will partly involve creating a voluntary mechanism for buying gas and renewable hydrogen for the EU, making optimal use of the EU's collective political and market weight. In addition, five regional groups were created (South-East Europe, Central Eastern Europe, North-West, South-West and Baltics), to draw up action plans to operationalise the EU Energy Platform's endeavour.

3.4 Exploring the full potential of synergies and interlinkages with other planning instruments for the green and just transition

The updated NECPs should reflect the new planning funding instruments that have been set up since the first final NECPs were submitted in 2019. Access to some funds is conditional on the approval of dedicated Member States' plans. The NECPs should reflect in a consistent and integrated manner all the relevant policies and measures that contribute to achieving the national energy and climate objectives, targets and contributions, including the actions and funding opportunities stemming from other funding and planning instruments⁷⁸.

3.4.1 Recovery and Resilience Facility

It is important that Member States fully reflect the energy and climate investments and reforms of the national recovery and resilience plans (RRPs) in the updated NECPs⁷⁹ and build on them to achieve their updated 2030 targets, objectives and commitments. In quantitative terms, the Recovery and Resilience Facility (RRF) provides the largest new funding source for energy and climate policy. Up to August 2026⁸⁰, the RRFs will continue to

⁷⁸ For an overview of EU funding tools and instruments for a fair green transition, see Annex 3 of the Staff Working Document accompanying the Commission proposal for a Council Recommendation on ensuring a fair transition towards climate neutrality, SWD/2021/452 final.

⁷⁹ Established by Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility.

⁸⁰ About 40% of the Recovery and Resilience Plans' (RRP) allocations relate to measures supporting climate objectives and several RRFs exceed by a substantial margin the 37% climate financing threshold set in the Regulation. Total climate expenditure in the 26 plans adopted by 5 October 2022 amounts to EUR 199.9 billion. In addition, the plans include EUR 18.4 billion of additional environmental expenditure, taking the total amount of expenditure tagged as contributing to either climate or environmental objectives to EUR 218.2 billion or 44.1% of the total allocation.

drive Member States' energy and climate reform and investment agendas to different degrees. The RRP were prepared to contribute to the NECPs' objectives, targets and contributions, in view of the increased ambition for 2030 and 2050. Under the REPowerEU plan, Member States should reflect additional policies and measures in their RRP by including a specific REPowerEU chapter.

To ensure transparency and consistency, the Commission invites Member States to clearly describe the role of the RRP, including the REPowerEU chapters, in implementing the updated NECPs. To this end, the updated national plans should provide quantitative information with respect to the contribution of the RRP measures to the updated climate and energy objectives and targets, also in terms of financing. In addition, **Member States are invited to cross-reference the RRP and REPowerEU chapter for each relevant policy and measure in their updated NECPs.** Member States should indicate whether the policy or measure is fully or partially part of the RRP and REPowerEU chapter and the role of the NECP in complementing the RRP and REPowerEU Chapters.

Where applicable, they should include a reference to the Council Implementing Decision (CID) on the approval of the assessment of their recovery and resilience plan. Member States should reflect on any extension of investments and reforms that can further contribute to the 2030 objectives, targets and contribution of their updated national plans.

The Commission also encourages Member States to use their experience of the RRP process. This can further improve the level of detail of investments and reforms in the updated NECPs in terms of cost estimates, financing, scope description, and including specific milestones and targets. The consistency between the two instruments will need to be maintained.

Although not a requirement under the current Governance Regulation, the Commission encourages Member States to apply the 'do-no-significant-harm' (DNSH) criteria when defining policies and measures for the updated NECPs. Full compliance with the DNSH criteria is a key design feature of the RRF. It ensures that the plans contribute to the green transition and to a sustainable recovery, while limiting damage to biodiversity, water and marine resources, boosting circularity and preventing pollution, avoiding the lock-in of unsustainable assets and activities. The Commission provided technical guidance on applying DNSH criteria in the context of the RRP⁸¹.

3.4.2 Just Transition Fund

The Just Transition Mechanism⁸², particularly the Just Transition Fund (JTF), has been created to mobilise investments between 2021 and 2027. This investment tool will help European regions most affected by the transition to climate neutrality, given their high dependence on fossil fuel extraction - including coal, peat and oil shale - and on carbon-intensive industrial processes. The JTF, part of cohesion policy, also applies the DNSH principle and excludes investments in fossil fuels. It sets a strong governance framework centred on TJTPs, which are being finalised. The TJTPs are strategic documents explaining the just transition process in each Member State and the activities to mitigate the expected

⁸¹ COM(2021) 1054 final.

⁸² Announced as part of the European Green Deal Investment Plan Communication on 14 January 2020.

socio-economic consequences in the most affected territories. The TJTPs will be the framework for the measures and investments in coal-dependent regions and/or regions with high GHG emissions industries (such as chemical, steel and cement industries) most negatively impacted by the transition.

Member States shall reflect in the updated NECPs the transition process outlined in the Territorial Just Transition Plans (TJTPs). Member States should explain the synergies between the 2030 climate and energy targets and the transition from fossil fuels. They should also describe how the achievement of the national targets will mitigate socio-economic impacts in a targeted manner at the regional level.

3.4.3 Social Climate Fund

The Commission encourages Member States to include the underlying analysis 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. The SCF⁸³ is proposed under the Fit for 55 package to address the social impacts on vulnerable households, transport users and micro-enterprises that may arise from the inclusion of buildings and road transport in an emission trading system (ETS). The aim of the SCF is to support vulnerable groups in reducing their reliance on costly fossil fuels by making buildings more efficient, decarbonising heating and cooling of buildings (including integrating energy from renewable sources) and increasing access to sustainable transport. The SCF also aims to support vulnerable groups through national measures, providing targeted temporary direct income support, while investment measures are being deployed.

When the negotiations on the Fit for 55 package are finalized, there will be a close link between the NECPs and the SCF plans because the NECPs outline the policy framework in which the SCF will operate. The SCF plans will be framed by the planned reforms and commitments made by the Member States in the NECPs. The SCF plans themselves will focus on concrete measures and investment financed by the SCF. They will also ensure consistency and develop synergies with the NECPs and other relevant EU programmes and instruments.

3.4.4 Common agriculture policy

The Commission encourages Members States to seek synergies between the common agriculture policy strategic plans (CSPs) and NECPs. Through their national CSPs, Member States have designed support schemes, which include addressing climate, energy, health, and biodiversity objectives. The Commission has provided recommendations and observations on each Member State's CSP. Member States furthermore identified or planned national measures outside the CSPs that could contribute these ambitions. With these objectives in mind, Member States are obliged to reassess and, where necessary, adjust their CSPs once the more ambitious targets introduced by the LULUCF Regulation and amended Effort Sharing Regulation (still to be adopted) enter into force⁸⁴. Member States should update the NECPs and CSPs and explore synergies between them wherever possible.

⁸³ Proposal for a Regulation of the European Parliament and of the Council establishing a Social Climate Fund, COM(2021)568.

⁸⁴ Strategic Plan Regulation (EU) 2021/2115, Article 120.

The link between the two processes can be further improved by: (i) strengthening efforts to assess the impacts of agricultural policies and measures on reducing greenhouse gas emissions; (ii) increasing carbon removals and (iii) identifying relevant renewable energy sources such as biomethane. The Commission and the European Environment Agency are organising capacity-building as part of the activities to improve reporting on climate policies and measures⁸⁵.

3.4.5 Cohesion policy

In their updated NECPs, Member States are invited to reflect on synergies with existing planning documents drawn up under EU cohesion policy for 2021-2027. EU cohesion policy (delivered through the European Regional Development Fund, Cohesion Fund, European Social Fund Plus and Just Transition Fund) contributes to strengthening economic, social and territorial cohesion⁸⁶.

In 2021-2027, cohesion policy (mobilising EUR 392 billion of EU investments) focuses on five policy objectives (including one on a green, low-carbon transition towards a climate neutral economy) and the European Green Deal. To benefit from cohesion policy funds, Member States are required to prepare partnership agreements followed by operational programmes. The latter need to take the NECPs into account and address any challenges identified in them. Member States are also required to fulfil the enabling conditions, including those related to having a complete NECP, energy efficiency, renovation of residential and non-residential buildings and renewable energy, energy efficiency, renovation of residential and non-residential buildings and renewable energy.

3.5 A strong analytical basis

Reliable updated national plans need to reflect a strategic vision and be underpinned by a sound and robust quantitative analysis of current and projected situations. A strong analytical basis will also ensure that the different parts of the plan are comprehensive and comparable. The NECP's analytical section begins with the current situation, including projections with existing policies and measures⁸⁷, which has significantly evolved since the initial NECPs. The 'current situation' section of the updated plan, for each of the Energy Union's five dimensions, needs to reflect any relevant change based on the latest available information. In particular, the social and economic impact of the COVID-19 pandemic should be factored in, as well as the current geopolitical situation affecting energy prices, and the internal energy market and energy security and emission trends more broadly.

Member States are encouraged to make use of the most up-to-date modelling tools and approaches. To ensure a consistent approach, Member States should use the same key parameters for oil, gas, and coal import prices as well as carbon prices under the EU emission trading system as those used for reporting under Article 18 of the Governance Regulation.

⁸⁵ Webinar on the evaluation of agricultural greenhouse gas policies and measures, July 2022, see <https://www.eionet.europa.eu/etcs/etc-cm/products/webinars-and-workshops/2021-webinar-on-the-evaluation-of-agricultural-greenhouse-gas-policies-and-measures>.

⁸⁶ In 2014-2020, it has been the main EU source of funding for investments in climate and energy, with nearly EUR 70 billion invested. Cohesion policy supporting the Energy Union, European Structural and Investment Funds (europa.eu)

⁸⁷ Article 8 of the Governance Regulation.

Member States should clearly reference the sources underpinning their analysis to ensure transparency of the data used. Whenever possible, the Commission invites Member States to use official European statistics.

3.5.1 Scenarios and timeframe

The updated NECPs shall describe the current situation⁸⁸ by including greenhouse gas projections of sectoral developments and projections for other dimensions of the Energy Union, with existing measures (i.e. a “WEM” scenario) at least until 2040, including 2030⁸⁹. In addition, the updated NECPs should include projections with additional planned policies and measures (i.e. a “WAM” scenario)⁹⁰. These projections will allow to assess the impact of such planned policies and measures, and compare their impact with those of existing policies and measures, running at least to 2040^{91,92}. Member States must also describe the way existing and planned policies and measures contribute to achieve the EU’s climate-neutrality objective set out in Article 2(1) of the European Climate Law⁹³.

The European Climate Law changes the requirements for projections of anthropogenic greenhouse gas emissions⁹⁴ to a sequence of 6 instead of 4 future years ending with 0 or 5, immediately following the reporting year. As Member States will prepare greenhouse gas emissions projections until 2050 for the submission under Article 18 of the Governance Regulation by 15 March 2023, they are encouraged to provide projections until 2050 for both WEM and WAM scenarios in their updated NECPs, to show the trends towards the climate neutrality in the EU.

Member States must make available to the public a detailed description of the assumptions, parameters and methodologies used for the final scenarios and projections, taking into account statistical restrictions, licensing restrictions of commercial datasets, and compliance with data protection rules⁹⁵. Open access tools and data should be used as much as possible to promote transparency, validation and comparability of the results.

3.5.2 Assessing economic, social and environmental impacts

In the updated national plans, Member States shall assess the national, and where applicable, regional level macroeconomic impact of the planned policies and measures or groups of policies and measures. Where possible, their impacts on health, the environment, competitiveness, employment, skills and society shall also be assessed. This should include a comparison with the projections based on existing policies and measures or groups of measures⁹⁶ with a specific focus on the assessment of distributional impacts⁹⁷ and energy poverty⁹⁸. The Commission regularly makes available the results of research projects

⁸⁸ In line with Section B of Annex I to the Governance Regulation.

⁸⁹ Annex I, Section B.4.2.1.ii. of the Governance Regulation.

⁹⁰ Annex I Section B.5 of the Governance Regulation.

⁹¹ At least until 10 years after the period covered by the plan.

⁹² Annex I, Section B, 5.1.i. of the Governance Regulation.

⁹³ Article 8(2)(e) of the Governance Regulation

⁹⁴ [National energy and climate plans | European Commission \(europa.eu\)](https://ec.europa.eu/euro-observatory/national-energy-climate-plans/)

⁹⁵ Article 8(3) of the Governance Regulation.

⁹⁶ Article 8(2)(b) of the Governance Regulation.

⁹⁷ See Communication on Distributional Impact Assessment, COM(2022) 494 final.

⁹⁸ Article 3(3)(d) of the Governance Regulation.

in this area, including macro and micro modelling for assessing employment, social and distributional impacts of the clean energy transition, or geopolitical developments (e.g., energy price scenarios)⁹⁹. Those elements can support the update of the national plans.

Member States are encouraged to consider issues such as possible economy-wide or sectoral bottlenecks, in particular for energy supply, water and raw materials, and workforce and skills availability. Moreover, expected changes in the sectoral composition of Member States' economy should be described because some industries will decline, some will emerge and/or grow, and others will transform. In this regard, considerations on the research, innovation and competitiveness of the clean energy sector should be included. The positive impact of the energy transition should also be fully assessed.

The environmental impact addressed in the updated plans should reflect the findings of the national energy and climate progress reports (NECPRs)¹⁰⁰. The plans should also consider the current and future interactions between decarbonisation and the reduction of pollutants emissions (depollution). The connections between water, energy and climate play a critical role in achieving the Energy Union objectives. Extreme events such as droughts and high temperatures create stress on power systems, affecting power plant operations. Low water levels are exacerbating Europe's energy crisis, affecting hydropower and nuclear generation and inland navigation. Member States are invited to describe the impact of the planned policies and measures in the updated NECPs on water management (including droughts, floods and water demand) and aquatic ecosystems, notably on the energy security dimension. Member States are encouraged to develop the updated NECPs in accordance with the relevant planning documents for water management, such as River Basin Management Plans, Flood Risk Management Plans and Drought Management Plans.

The Commission encourages Member States to develop the updated NECPs closely with the update of their national air pollution control programmes (NAPCPs)¹⁰¹. Compared to the initial NECPs, there is still scope in the update to improve and strengthen the assessment of the impact of planned policies and measures on air pollutant emissions. As part of the integrated NECPRs, Member States will also report information on the quantification of the impact of policies and measures (or groups of policies and measures) on air quality and on air pollutant emissions. Nevertheless, an assessment in the NECPs enables Member States to prioritise those measures that maximise aggregate benefits. In addition, the policies and measures should be consistent with the EU biodiversity strategy¹⁰², the circular economy action plan¹⁰³, the zero pollution action plan¹⁰⁴ and Europe's Beating Cancer Plan¹⁰⁵.

The environmental impacts addressed in the updated plans should also reflect the impacts of the climate and energy policies on biodiversity. Climate change and biodiversity loss are interrelated. Energy and climate policies can lead to synergies but also

⁹⁹ See for instance the GD-AMEDI and the AMEDI+ projects, jointly run by DG EMPL and DG JRC. The main outputs of both projects will be presented and made accessible on a joint project website.

¹⁰⁰ Article 14(4) of the Governance Regulation.

¹⁰¹ This update will be due in 2023 for most Member States, i.e. four years after the adoption of the first NAPCP, in line with Article 6(3) of Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.

¹⁰² COM/2020/380 final.

¹⁰³ COM/2020/98 final.

¹⁰⁴ COM/2021/400 final.

¹⁰⁵ https://ec.europa.eu/health/sites/health/files/non_communicable_diseases/docs/eu_cancer-plan_en.pdf

trade-offs with biodiversity (e.g., nature restoration or nature-based solutions to increase sinks vs. deforestation or forest degradation to produce biomass for energy). These impacts should be reflected and quantified in the updated national plans.

3.5.3 Integrating and modelling the contribution of the circular economy to the climate transition

In their updated national plan, Member States are encouraged to set out their key circular economy policies and measures that affect greenhouse gas emissions, energy consumption and the use of critical raw materials. The circular economy reduces waste (including organic waste, source of methane emissions) and the use of virgin resources (including energy and critical raw materials) and so decreases greenhouse gas emissions. It creates jobs in proximity to the products that need to be maintained, refurbished or shared¹⁰⁶. Moreover, circularity improves the availability of raw materials, reducing the European economy's dependence on imports. The circular economy also creates new jobs and opportunities at different skill levels, including for often under-represented groups in the labour-market such as women, persons with disabilities and vulnerable groups. The updated NECPs should cross-reference those strategies, action plans and legislation related to circular economy with impacts on energy and greenhouse gas emissions. NECPs should also estimate the actual and expected greenhouse gas emission reductions obtained thanks to circular economy measures, using available modelling tools.

Member States should report on key waste and wastewater policies and measures, aiming to reduce methane emissions. They should include the quantification of the actual or estimated impact of such policies and measures on greenhouse gas emissions. Member States are also encouraged to provide information on the models used to estimate the impact.

3.6 Financing the energy and climate transitions: Matching investment needs with available public and private financing

Member States are encouraged to include a comprehensive and consistent overview of the public and private investment needed to meet their energy and climate objectives, targets and contributions in their updated national plans. When submitting the national plans in 2020, all Member States set out energy investment needs, including sectoral breakdowns. However, not all Member States covered investment needs for all five dimensions of the Energy Union or provided a comprehensive overview of the investment needs for the climate transition, including climate adaptation measures. Moreover, the methodologies and templates used to present the various figures were often inconsistent. The differences in approaches and depth of analysis made it difficult to compare investment estimates across all national plans. This meant there was insufficient predictability for investors and that the overall robustness of the national plans were lowered.

To ensure a consistent overview between investment needs and financing, Member States are encouraged to consolidate the overview at the level of each individual or groups of policies and measures. For each of them, information on the investment expected to be delivered and its financing from the public side (national and EU level) and the private

¹⁰⁶ Circular Economy Action Plan, COM(2020)98.

side shall be described. The template in Annex XIII on Progress towards financing of the NECPR could be used as a reporting structure.

3.6.1 *Estimating investment needs*

Member States shall provide information in their updated NECPs on the investment volumes they expect to require regarding the planned policies and measures¹⁰⁷. The Commission invites Member States to outline the sources of financing to implement planned key policies and measures or groups of policies and measures (see Section 3.6.2 below). For policies and measures that have already been adopted and implemented, Member States should provide an overview of the initial investment estimated and where available, actual investment using, where possible, information collected through the NECPRs. If possible, this overview should be broken down by key policies and measures or groups of policies and measures. A good analytical basis helps identify investment needs. Such needs can be estimated in different ways, using complementary top-down or bottom-up approaches. While top-down approaches are best suited to compare alternative policy scenarios, bottom-down approaches help track the needs for individual investment and reforms.

Box 8: Good practices to describe the estimated investment needs

To improve transparency, Member States are particularly encouraged to include the following elements in their updated NECPs:

- A description of the methodology used to calculate the estimates;
- A description of the baseline (i.e., a scenario *without* the additional investment);
- A clear indication of what the numbers refer to (e.g., cumulative vs annual additional investment, nominal vs discounted values) and, possibly, the types of investment included (e.g., capital, durable goods, operating expenses);
- A break-down of investment along well-defined groups of key policies and measures, possibly the five dimensions of the Energy Union and/or sectors in line with the integrated progress reporting;
- Information on the investment volume expected to be triggered and expected to be required to achieve each policy and measure (PaM), and the source of financing (public (national, EU, including RRF) and private – where available).
- The base year of the investment value and the relative discount rate.

3.6.2 *Public and private financing*

Member States are encouraged to describe in both quantitative and qualitative terms the financing of each policy and measure included in the updated NECPs. This includes information on how the EU and national funding instruments will be used¹⁰⁸. For instance, how to use programmes under the EU budget, such as the RRF, revenues generated through the EU ETS (including the Modernisation Fund, the Innovation Fund as well as national auctioning revenues) and other nationally available resources. Since various EU and national instruments can complement each other, Member States are encouraged to describe how they have created cost-efficient synergies and blended solutions for public financial support how is

¹⁰⁷ Annex I, Section.5.3.(i) to the Governance Regulation.

¹⁰⁸ The 2022 State of the Energy Union, COM(2022) 547, contains a list of EU funding instruments available.

double funding avoided, and how public instruments are expected to further mobilise private investment.

Member States are invited to describe the role development banks play in financing energy and climate investments, as well as in crowding in private capital. For instance, the European Investment Bank has set a series of objectives (both within the EU and in its global operations) as the EU's 'climate bank': 50% of its operations will support climate action and environmental sustainability by 2025; all of its financing since the end of 2020 has been aligned with Paris Agreement; and it has set an overall target of mobilising at least EUR 1 trillion in climate and environment projects in the current decade.

The updated NECPs should also provide an overview of how much the private sector is expected to finance planned policies and measures. For example, for energy efficiency, Member States should provide detailed information on the expected volume of private investment, and the uptake by consumers of energy efficiency lending products (green loans, energy efficiency mortgages).

4 An iterative process with the Commission and the way forward

The Commission expects that all Member States respect the timing set out in Article 14 of the Governance Regulation. Member States should prioritise preparing the draft final updated plans given the higher ambitions and the limited time that remains before 2030.

The Commission is fully engaged to support Member States in updating the NECPs. In particular, the Commission will continue to engage with Member States at technical level, to ensure further in-depth exchanges and provide additional details on specific aspects of this guidance. The Commission will organise relevant working groups, bilateral exchanges, and engage in sectoral and regional settings to support good cooperation throughout the process.

Beyond regular exchanges, the Commission uses several instruments, including the European Semester and the Technical Support Instrument, as well as several supporting measures and studies, such as support contracts for preparing and assessing the NECP updates. After Member States submit the draft updated national plans¹⁰⁹, the Commission will assess them and may issue country-specific recommendations to Member States, as provided for in the Governance Regulation.

As part of the iterative process between Member States and the Commission, the Commission will assess the NECPs against the requirements of the Governance Regulation and will take full account of the guidance provided in this document. The Commission will pay particular attention to whether the objectives, targets and contributions set by Member States are sufficient for the collective achievement of the Energy Union, including those in the relevant legislation currently being negotiated as well as in assessment of the individual plans.

¹⁰⁹Article 31 of the Governance Regulation.

Table 1: Key objectives, targets and contributions and policies and measures put forward in legislation, strategies and proposals.

Note: this table is not exhaustive, but rather summarises key elements to consider for the update of the NECPs.

Initiative	Reference	Type	Objectives and targets	Policies and measures
European Green Deal	COM(2019) 640 final	Communication	• Climate neutrality at EU level by 2050. • Increase the EU's greenhouse gas emission reductions target for 2030 to at least 50% and towards 55%.	n/a
European Climate Law	Regulation (EU) 2021/1119	Adopted Legislation		
Powering a climate-neutral economy: An EU Strategy for Energy System Integration	COM(2020) 299 final	Communication	• No additional objectives	Measures to: • use energy system integration to balance the electric grid and ensure the integration of renewable electricity; • connect the heating and electricity sector to ensure higher integration of renewables in both; • connect various end-use sectors, and the energy sector, to ensure the use of waste heat; • ensure access to data for electric vehicle users.
A hydrogen strategy for a climate-neutral Europe	COM(2020) 301 final	Communication	• 6 GW of renewable hydrogen electrolyzers in the EU by 2024 and 40 GW of renewable hydrogen electrolyzers by 2030.	n/a

Commission recommendation on energy poverty	COM (2020) 9600	Communication	• No additional objectives	Measures to: • reduce and/or alleviate energy poverty through energy efficiency; • safeguard energy access of all groups of consumers, especially the most vulnerable.
An EU Strategy to harness the potential of offshore renewable energy for a climate-neutral future	COM(2020) 741 final	Communication	• Installed capacity of at least 60 GW of offshore wind and at least 1 GW of ocean energy by 2030, with a view to reach 300 GW and 40 GW by 2050, • Member States to integrate objectives of offshore renewable energy development in their national maritime spatial plans.	• n/a
Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change	COM (2021) 82 final	Communication	• A climate-resilient society, fully adapted to the unavoidable impacts of climate change.	• There are 48 public policy commitments in the strategy • Nature-based solutions roll-out, to help reduce climate risk, health treats, increase climate protection, and safeguard freshwater access. • Drought management plans, measures to increase the water retention capacity of soils and safe water reuse.
Fit for 55: delivering the EU's 2030 Climate Target on the way to climate neutrality	COM (2021) 550 final	Communication	n/a (objectives are in accompanying proposals)	n/a (measures are in accompanying proposals)

Recast of the Energy Efficiency Directive [1]	COM(2021)558 final	Legislative proposal	• EU-level target of 9% for energy efficiency in 2030 and Member States' revised contributions to this target. • Energy savings obligation – sub-target for energy savings coming from energy poverty and affordable social housing. • Target on reducing total final energy consumption of all public bodies. • Requirement to renovate all public buildings to nearly-zero-emission building levels.	• Measures reflecting the ‘energy efficiency first principle’. • Measures to remove barriers to energy-efficient public procurement. • List of public bodies that must contribute to the target on decreasing total final energy consumption of public bodies. • Measures for achieving the energy savings requirement. • Measures on energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure. • Measures to promote energy audits and energy management systems. • Comprehensive heating and cooling assessment (to be applicable for final NECP 2024). • Measures to promote and facilitate an efficient use of energy by final customers and final users. • Measures to encourage public bodies to use energy performance contracting for renovating large buildings. • Measures to promote energy services in the public sector. • Certification and/or equivalent qualification schemes for energy efficiency professions. • Financing energy efficiency programmes and schemes .
Revision of the Renewable Energy Directive (main) [1]	COM(2021)557 final	Legislative proposal	• The upward-revised 40% EU-level target for renewable energy sources (RES) in 2030	• Joint projects for renewable energy production (Art. 9). • Certification schemes for RES designers and installers (Art. 18).

			and Member State's revised contributions to this target. • The upward-revised greenhouse gas intensity and reduction target in the transport sector. • The upward-revised sub-target for advanced biofuels for 2025 and 2030. • The new sub-targets for renewable fuels of non-biological origin in transport. • The new annual increase in the share of renewables in heating and cooling, including binding part of the increase and Member States' voluntary addition increase rates. • The upward-revised indicative annual increase in district heating and cooling • The new indicative benchmarks for the share of renewables in the national building	• Measures on system integration (Art. 20 and 20a). • Measures to achieve the annual average increase in the share of renewables in heating and cooling in line with Art. 24(1)-(2), and measures applied from the list under Art. 23(4). • Assessment of the national potential of energy from renewable sources (Art. 23(1a)). • Measures to achieve the annual average renewables' share increase in district heating and cooling. • Measures to increase renewables' share in cooling and district cooling. • Framework to enable sector integration between energy networks. • Credit mechanism under the transport obligation (Art. 25). • Measures related to the sustainability criteria, including on no-go areas for forest biomass. • Measures ensuring the biomass cascading principle.
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			sector in 2030. • The new indicative annual increase of the RES share in industry for 2021-2030. • The new RFNBO target in industry for 2030 and 2035.	
Methane emissions reduction in the energy sector	COM(2021)805 final	Legislative proposal	n/a	• Methane mitigation plans and measurement of abandoned mine methane mines and inactive wells.
Carbon border adjustment mechanism	COM(2021)564 final	Legislative proposal	• Addressing greenhouse gas emissions embedded in specific goods, when they are imported into the EU's customs territory to prevent the risk of carbon leakage.	N/A
Revision of Energy Taxation Directive	COM/2021/563 final	Legislative proposal	• . • Ensure that clear taxation rules for energy products and electricity continue to contribute to the smooth functioning of the internal market while at the same time ensuring that the taxation better reflects the impact they have on	• Measures to impose taxation on energy products and electricity in line with the Directive.

			the environment and on health	
Ensuring a level playing field for sustainable air transport (RefuelEU aviation)[2]	COM/2021/561 final	Legislative proposal	• Sustainable aviation fuels are mandated to account for 2% of aviation fuel in 2025, 5% in 2030, and 63% in 2050.	n/a
Use of renewable and low-carbon fuels in maritime transport (FuelEU maritime) [2]	COM/2021/562 final	Legislative proposal	• Limit on the greenhouse gas intensity of energy used on-board a ship. • Obligation to use on-shore power supply or zero-emission technology in ports.	n/a
Deployment of alternative fuels infrastructure[2][3]	COM/2021/559 final	Legislative proposal	• National targets for the deployment of sufficient alternative fuels infrastructure in the Union, for road vehicles, vessels and stationary aircraft.	n/a
Emissions trading system (ETS) (main) – including maritime,	COM(2021) 551 final	Legislative proposal	• Contribution of the sectors covered by the EU ETS of -61 % in 2030 compared to 2005. • Emission reductions of	• Carbon pricing and providing climate funding through auction revenues, the Modernisation Fund and the Innovation Fund, together with the market stability reserve (MSR) as a tool to ensure the stability of the carbon market.

buildings and transport			43 % in 2030 compared to 2005 for the buildings and road transport sectors.	
ETS Market Stability Reserve	COM(2021) 571 final	Legislative proposal	• Keeping current parameters of the MSR post-2023 to ensure market predictability: intake rate of 24 % and minimum amount of 200 million allowances to be placed in the reserve.	n/a
ETS aviation	COM(2021) 552 final	Legislative proposal	• Phase out free emission allowances for aviation to 100% in 2027, and consolidate the total quantity of aviation allowances at current levels applying the ETS linear reduction factor.	n/a
ETS as regards notification on CORSIA	COM(2021) 567 final	Legislative proposal	n/a	n/a
Social Climate Fund	COM (2021) 568 final	Legislative proposal	n/a	• National social climate plan. • Measures to increase energy efficiency of buildings. • Measures to increase the decarbonisation of heating and cooling of buildings. • Measures granting improved access to zero- and low-emission mobility and transport.
Just Transition Fund	Regulation (EU)	Adopted Legislation	• n/a	• Activities supported under art. 8

	2021/1056			
Revision of Effort Sharing Regulation	COM/2021/555 final	Legislative proposal	Increased EU greenhouse gas emission reduction target by 2030 in effort sharing sectors to 40% compared to 2005 levels, and split EU targets into binding national allocations.	n/a
Revision of Land use, land use change and forestry Regulation	COM/2021/554 final	Legislative proposal	- Increased EU's carbon removals target by 2030 in land-use, land-use change and forestry sector to 310 Mt and national binding targets for 2026-2030. - Aim for climate neutrality for 2035 in the land sector.	- Integrated mitigation plans for the land sector. - Link with biodiversity and nature restoration.
CO₂ for cars and vans	COM/2021/556 final	Legislative proposal	- Passenger cars: 2030 EU fleet-wide target equal to a 37.5 % reduction of the target in 2021. 2035 target is a 100% reduction. - Commercial vehicles: 2030 EU fleet-wide target equal to a 31 % reduction of the target in 2021. 2035 target is a 100% reduction.	n/a

Recast Energy Performance of Buildings Directive	COM(2021) 802 final	Legislative proposal	• Nationally established targets to ensure a highly energy efficient and decarbonised national building stock and transforming existing buildings into zero-emission buildings by 2050. • New minimum energy performance standards. • Update of the definition of nearly-zero energy building for new and existing buildings.	• National building renovation plan. • Measures on support compliance with minimum energy performance standards (Art. 9(3)).
Hydrogen/gas Regulation revision	COM(2021) 804 final	Legislative proposal	n/a	• Preventive and emergency measures for security of gas supply. • Measures related to cyber-security.
Hydrogen/gas Directive revision	COM(2021) 803 final	Legislative proposal	n/a	• Measures enabling a hydrogen market, in particular the infrastructure. • Measures on consumers right for hydrogen.
Recommendation on ensuring a fair transition towards climate neutrality	2022/C 243/04	Council Recommendation	• Ensure that the EU's transition towards a climate-neutral and environmentally sustainable economy by 2050 is fair and leaves nobody behind.	• Comprehensive and consistent policy packages on: a) active support to quality employment; b) education, training and life-long learning; c) fair tax benefit systems and social protection; d) access to essential services/housing.
Security of supply and affordable energy prices:	COM(2022) 138 final	Communication	n/a	• Financial compensation on retail and wholesale market such as income support, reduced taxation, aggregation model.

Options for immediate measures and preparing for next winter				• Fixed price for generators.
Gas storage level obligations	Regulation (EU) 2022/1032	Regulation	• Minimum 80% gas storage level by 1 November 2022, rising to 90% in the following years. • National objectives to increase the flexibility of energy systems, including energy storage.	• Measures to ensure that the filling trajectories and targets are met in the following years, and ensure the filling of underground storages. • Measures in place to coordinate with Member States.
RepowerEU Plan	COM(2022)230 final	Communication	• National objectives to phase out Russian gas. • National objectives on diversifying energy sources and supply from non-EU countries. • National objectives to substitute Russian fossil fuels by deploying domestic energy sources, in particular renewable energy and low carbon gases. • Targets to produce renewable gases, in particular by contributing to boosting	• Revised preventive action plans and emergency plans. • Diversifying of gas and oil supply routes. • Diversifying of heating sources. • Solidarity mechanisms among Member States. • Measures to foster regional cooperation and relation with international partners. • Policies and measures delivering on creating the conditions for a shift from fossil fuels to renewable and low-carbon gases, in particular sustainable biomethane, and renewable hydrogen.

			methane production to 35 bcm by 2030. • Targets for hydrogen production.	
EU 'Save Energy'	COM/2022/240 final	Communication	n/a	• Measures on short term demand reduction. • Measures to strengthen energy efficiency as listed in Section 3.2 of the Communication. • Measures to increase energy efficiency in transport and encourage the switch to efficient renewable initiatives. • Financing measures to accompany such investment.
EU Solar Energy Strategy	COM/2022/221 final	Communication	• EU solar photovoltaic capacity at almost 600 GW by 2030. • National objectives to set up renewables-based energy community in every municipality with a population of more than 10.000 people.	• Measures to enable an effective self-consumption in multi-apartment buildings (implementation of Renewable Energy Directive II). • Measures to ensure energy poor households and vulnerable consumers have access solar energy. • Investments framework and action to speed up solar investments in combination with renovations, storage and heat pumps. • Measures to eliminate administrative obstacles for cost-effective extensions of systems already installed. • Measures to support building-integrated photovoltaics for new buildings and renovations. • Measures to assess and remove unjustified barriers to developing renewable and citizen energy communities. • Measures to lift barriers to innovative forms of solar energy deployment.
EU external energy engagement in a changing world	JOIN/2022/23 final	Communication	n/a	• Measures to prepare the EU for renewable hydrogen trade, prioritising the energy and water needs of local populations.

				Measures to facilitate the availability of and the access to finance for energy efficiency and saving investments.
Amendments to Renewable Energy, Energy Performance of Buildings and Energy Efficiency Directives	COM/2022/222 final	Legislative proposal	- The upward-revised 45% EU-level target for RES in 2030. - EU-level target of 13% for energy efficiency in 2030 and the Member States' revised contributions to this target. - National objectives on the determination of "go to areas".	- Mapping the areas necessary for meeting national contributions towards the EU's 2030 renewable energy target. - Measures on renewables go-to areas. - Measures to comply with the time limits for granting permits. - Measures to limit the length of time to permit rooftop solar installations (REDII revision). - Measures to ensure all new buildings are 'solar ready', and to make solar compulsory for categories of buildings (EPBD revision).
Recommendation on permitting procedures and Power Purchase Agreements	C/2022/3219 final	Recommendation	- National objectives and targets for upskilling and reskilling staff to bridge the skills gap of staff working on permit-granting procedures and environmental assessments. - Long term trajectories for planned expansion for renewable energy.	Measures to: - accelerate and simplify permit-granting processes; - simplify regimes for renewable energy communities; - streamline authorisation procedure and design a one-stop shop; - roll out digitalised procedures; - streamline environmental procedures; - simplify repowering existing renewable energy; - encourage innovative projects; - facilitate corporate power-purchasing agreements.
Guidance on permitting procedures and Power Purchase Agreements	SWD(2022)149	Guidance	Same as for the Recommendation on permitting.	Same as for the Recommendation on permitting.

RRF amendment (REPowerEU chapters)	COM(2022) 231 final	Legislative proposal	n/a	• REPowerEU chapter to be included in the recovery and resilience plan.
Guidance on Recovery and Resilience Plans in the context of REPowerEU	C(2022)3300 final	Commission notice	n/a	• New measures contributing to the REPowerEU objectives (list of possible investments and reforms provided in the notice).
Save gas for a safe winter	COM (2022)360 final	Communication	• National objectives to achieve the 15% gas demand reduction plan.	• Measures to reduce heating and cooling in buildings. • Measures to save gas in electricity and heat production. • Measures to encourage fuel switching in industry.
Coordinated demand reduction measures for gas	Regulation (EU) 2022/1369	Regulation	• Reduction of national gas consumption from 1 August 2022 to 31 March 2023 by at least 15 % compared to the average gas consumption from 1 August to 31 March in the 5 consecutive years.	n/a
Emergency intervention to address high energy prices	COM(2022) 473 final	Legislative proposal	• Reducing of electricity consumption by 10% compared to the reference period. • Reducing of electricity consumption in peak hours by 5%.	• Measures to accelerate the uptake of renewables power purchase agreements, in particular by SMEs.
Digitalisation of Energy System EU Action Plan	COM (2022) 552 final	Communication	n/a	Measures to: • increase R&I investment in digital solutions for energy, including scale-ups;

				• increase investments in developing, deploying, testing and piloting, and market uptake of digital solutions for energy; • increase investment in the smartness of the electricity grid; • promote energy system integration and planning of digital infrastructure, for example by reusing waste heat from data centres • Explore all options of public networks (notably 5G bases) and f spectrum bands for energy grid solutions requiring European wide connectivity • empower consumers, raise digital skills, and offer them smart energy services; • address the carbon footprint of information and communication technologies; • foster cooperation between energy and digital players and create synergies between the energy and digital agendas.
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[1] COM/2022/222 final (see elsewhere in the table) has proposed to further increase some of the targets in this proposal.

[2] Proposal with a different legal base than the Governance Regulation. Member States should ensure consistency between the NECP and objectives/targets, and the policies and measures to achieve them, as required under this proposal. Member States are encouraged to include policies and measures related to this proposal in the NECP if they have important climate and energy features.

[3] Member States should ensure consistency between the NECP and the national policy framework in this proposed Regulation.