NATIONAL ENERGY & CLIMATE PLANS

OVERVIEW OF ENERGY STORAGE AND FLEXIBILITY TARGETS





The National Energy and Climate Plans (NECPs) are essential documents in which EU countries outline their national strategy over the next 10 years to meet the EU energy and climate targets for 2030. The European Association for Storage of Energy (EASE) shares key overviews on the recent publication (28 May 2025) of the European Commission's assessment of the Member States' latest National Energy and Climate Plans.



Most Member States' NECPs reference the importance of flexibility and energy storage. Several Member States foresee energy storage targets.



Most Member States' NECPs lack clear energy storage targets beyond the 2030 timeframe, clear policies to achieve such targets, and a methodology for estimating future flexibility needs.

ANALYSIS

The analysis of the latest National Energy and Climate Plans (NECPs) and the European Commission's assessments on them, shows that many EU Member States are making progress in strengthening their frameworks for energy storage and flexibility, but with some missing elements.

The evaluation is based on four key criteria, which have been merged for clarity:

- 1. Target setting Does the NECP include clear goals for how much energy storage is planned, how flexible the energy system needs to be, and how well different sectors (like electricity, transport, and heating) are connected?
- 2. Enabling frameworks Does the plan include:
 - Rules for Power Purchase Agreements (PPAs) to support long-term investments in energy storage facilities?
 - Simplified permitting procedures to speed up the administrative processes and approval of new storage projects?
 - Legal and financial support for self-consumption and energy communities, so that citizens can produce, store, and share their renewable energy?
- 3. Energy system resilience Does the plan take steps to make the energy system more stable and prepared for changes?
- 4. NECP-RRP consistency Does the NECP match up with each country's RRP in terms of funding and policy reforms?

^{*} In the EC assessment on Member States latest NECPs is indicated that: "The latest NECP covers sufficiently the main reforms and investments of the Recovery and Resilience Plan (RRP) that contribute to implementing the objectives, targets, and contributions of the Energy Union."

This structure highlights both national strengths and gaps, offering a clearer picture of how Member States are willing to set or update energy storage and flexibility targets, while ensuring system stability.

Overall, European Commission's assessments on the latest NECPs confirm that many Member States aim to strengthen energy storage legislation, however, some Member States still lack a comprehensive approach to energy storage development.

In particular, latest NECPs show varied progress, with Spain that sets a target of 22.5 GW storage by 2030; Greece targets 4.3 GW battery storage and 1.928 GW pumped hydro; Romania plans to install 1.2 GW battery and 0.8 GW pumped; Latvia includes 60 MW residential/business storage; Finland references future deployment up to 5 GW (even if it does not set a national target for storage).

Moreover, many countries - such as Finland, France, Germany, Greece, Italy, Luxembourg, Malta, and Portugal - are planning to further develop legislative frameworks to support PPAs. Some of them - such as Austria, Ireland, Italy, Malta, the Netherlands, and Portugal - are introducing measures to simplify permitting procedures, including digital one-stop shops, and specific guidelines for public access. Likewise, countries like Greece, Italy, Luxembourg, Portugal, and Sweden are enhancing legal and financial frameworks for energy communities and self-consumption, through the future update of regulations, tax incentives, and targeted funding.

Notably, no Member State has fully assessed its national flexibility needs, due in large part to the lack of a common EU methodology. This gap is expected to be addressed by the Flexibility Needs Assessment (FNA), as required under the Electricity Market Design reform (Regulation (EU) 2024/1106). However, as of June 2025, the final FNA methodology has not yet been published.

Finally, the alignment between NECPs and national Recovery and Resilience Plans (RRPs) also varies significantly. Countries such as Latvia, Finland, Italy, Luxembourg, Malta, the Netherlands, Portugal, and Spain show strong alignment, with NECP measures backed by specific RRP funding. In contrast, Bulgaria, Croatia, Czechia, Germany, Lithuania, and Romania often fail to cross-reference energy investment plans in their RRPs. France and Hungary, meanwhile, show clear inconsistencies between NECP priorities and RRP implementation, particularly in the area of flexibility and storage.

Details per Member State are available hereafter and summarised in the following table.

To enable consistent and transparent comparison across Member States, a three-colour assessment scheme has been applied:

- Green indicates the measure or target is comprehensively addressed
- Yellow reflects partial progress or commitment
- Red indicates very limited, no action or information provided

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THE STATUS OF ENERGY POLICIES AND ENABLING MEASURES IN THE NECPS

Achieved	Partially Not achieved	Inclusion of a target for storage, flexibility needs, and sector integration	Policies to enable PPAs, improve permitting, self- consumption / energy communities	Measures to strengthen the resilience of MS energy system	NECPs' consistency with Member States' Recovery and Resilience plans	
	AUSTRIA				*	
	BELGIUM	Assessment of the Latest Updated NECP for Belgium still to be published by the European Commission as of June 2025.				
	BULGARIA					
	CROATIA					
Van ander	CYPRUS				*	
	CZECHIA					
	DENMARK				*	
	ESTONIA		Assessment of the Latest Updated NECP for Estonia still to be published by the European Commission as of June 2025.			
+	FINLAND				*	
	FRANCE					
	GERMANY					
	GREECE				*	
	HUNGARY					
	IRELAND					
	ITALY					
	LATVIA					
	LITHUANIA					
	LUXEMBOURG					
#	MALTA					
	NETHERLANDS					
	POLAND	Assessment of the Latest Updated NECP for Poland still to be published by the European Commission as of June 2025.				
	PORTUGAL					
	ROMANIA					
#	SLOVAKIA		Assessment of the Latest Updated NECP for Slovakia still to be published by the European Commission as of June 2025.			
-	SLOVENIA					
<u>(\$.</u>	SPAIN					
	SWEDEN					

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HOW MEMBER STATES ADDRESS ENERGY STORAGE



Inclusion of a target for storage

Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Austria's latest NECP outlines a legal framework for flexibility in the drafted Electricity Industry Act (EIWG) and mentions sector integration, but lacks details. It proposes faster permitting via amendments to the Environmental Impact Assessment Act, still to be discussed. The plan promotes energy communities, encouraging local energy use and small-scale market participation, but the measures are still to be implemented. The NECP does not address quantifying flexibility needs and setting a target for storage. The latest NECP does not provide abundant details about its consistency with RRP. Interestingly, the plan also envisages the launch of a digital platform for procurement "CyberNOC/FlexRegler platform", to incentivise consumers to get used to time-of-use and dynamic tariffs in the energy market.

BELGIUM



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Assessment of the Latest Updated NECP for Belgium still to be published by the European Commission as of June 2025.

BULGARIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Bulgaria's latest NECP confirms the importance of storage, and enhances system flexibility by enabling non-discriminatory participation in flexibility services, aggregation, and market integration with neighboring countries. The plan mentions sectoral integration and PPAs, but does not provide details on their implementation. The NECP promotes energy communities and self-consumption with a revised legislative framework enabling aggregation contracts, still to be implemented. The plan does not address issues like permitting, quantifying flexibility needs, and setting a target for storage. The plan does not reference storage investments previously mentioned in the RRP, such as the RESTORE initiative, which foresees 3 GWh of new energy storage.

CROATIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Croatia's latest NECP plans to modernise the electricity system, and include a target of 250 MW in battery storage by 2030. While the plan mentions sector integration and simplifying permitting procedures, it does not provide implementation details. It references energy communities and energy sharing as part of its RES framework, but does not provide an adoption timeline. The plan does not address issues like PPAs, and quantifying flexibility needs. The NECP lacks consistency with its RRP, not providing any substantial reference on energy projects granted by the RRP.



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CYPRUS



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Cyprus' latest NECP references recent legislative measures enabling storage participation in flexibility services and aggregation, but it acknowledges they are unlikely to enter into force before 2030. The plan mentions sectoral integration, PPAs, and permitting, highlighting the need for amending national electricity market legislation, but provides very limited details. The plan incentivises energy communities, introducing a revised legislative framework with more favourable regulatory conditions for their development, but it is yet to be implemented. The NECP does not address how to quantify flexibility needs, and set a target for storage. The latest NECP does not provide abundant details about its consistency with RRP.

CZECHIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Czechia's latest NECP discusses the strengthening of energy storage through a forthcoming national action plan for developing non-fossil flexibility over the next 10 years. Such a plan is expected to build upon an already released report on the topic. The NECP mentions sector integration, but it does not provide implementation details. The plan proposes simplified permitting processes through the Construction Act, to be further discussed at the national level. The NECP introduces a more detailed legislative framework for energy communities, enabling electricity sharing and self-consumption, to be adopted. The NECP does not address issues like PPAs, quantifying flexibility needs, and setting a target for storage. All these envisaged measures are not accurately referenced in the RRP.

DENMARK



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Denmark's latest NECP acknowledges the importance of energy storage, but does not define specific storage targets or quantify flexibility needs, which are expected to be developed by 2027. The plan mentions sector integration, and permitting, but lacks details. The plan does not address issues like PPAs, energy communities, and self-consumption measures. The latest NECP does not provide abundant details about its consistency with RRP.

ESTONIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Assessment of the Latest Updated NECP for Estonia still to be published by the European Commission as of June 2025.









FINLAND



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Finland's latest NECP refers to a proposal for the deployment of around 5 GW of planned energy storage capacity in the future, but it does not set a national target. It highlights the growing role of PPAs, introducing risk-sharing measures for the consumer and better information access. The plan proposes legislative updates for energy communities and self-consumption, including tax adjustments and guidelines, which are still under discussion. It outlines the future definition of faster permitting procedures that include a digital contact point, still to be implemented. The plan discusses sector integration, but does not explicitly quantify flexibility needs. The NECP mentions that RRP will fund projects for renewable generation, but lacks details.

FRANCE



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



France's latest NECP outlines new measures to enhance flexibility, such as the use of peak-load tariffs, to encourage consumers to reduce their energy consumption from peak times. The NECP foresees developing a multi-year plan to tackle flexibility needs, which will be better defined in the future. It introduces sector integration and simplified permitting procedures, citing the 2023 Law on Renewable Energy Acceleration, although no implementation timelines are specified. The plan mentions ongoing support for energy communities and self-production, but does not present a revised legal framework. The plan does not address issues like PPAs, quantifying flexibility needs, and setting a target for storage. The NECP lacks consistency with its RRP, not providing any substantial reference on energy projects granted by the RRP.

GERMANY



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Germany's latest NECP outlines measures to improve flexibility in the energy system through an increased deployment of storage systems, but it does not define clear targets nor quantify flexibility needs. It promotes sector integration between storage, heating, and mobility, and references a 2023 electricity storage strategy to establish a legal framework for battery systems. The plan introduces update rules for PPAs, and energy communities, but implementation details are missing. Permitting is expected to be streamlined via central contact points managed by the Federal Network Agency to reduce bureaucratic barriers. The latest NECP, even if it mentions projects to enhance flexibility in the electric system, does not accurately reference them in the RRP. More generally, the plan lacks information on cross-border cooperation for grid congestion.

GREECE



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Greece's NECP sets targets to deploy 4.3 GW in battery storage and 1.928 GW of pumped hydro storage by 2030. The plan discusses sector integration, but it does not address flexibility

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needs. The plan introduces a national platform for PPAs to simplify access for consumers. The plan introduces new permitting rules for clean technologies, but does not specify an implementation timeline. The NECP strengthens the legal framework for energy communities, encouraging participation in energy sharing, storage, and e-mobility services, without providing implementation details. The latest NECP does not provide abundant details about its consistency with RRP. Interestingly, the plan foresees fully replacing conventional meters with smart meters by 2030.



Inclusion of a target for storage

Policies to enable
PPAs, improve
permitting, selfconsumption

Measures to strengthen the resilience of MS energy system NECPs' consistency with Member States' Recovery and Resilience plans



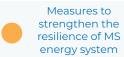
Hungary's NECP aims to increase battery storage installations up to 500-600 MW by 2026, and pumped-hydro storage up to 1 GW by 2030. Unfortunately, gas-fired plants are still perceived as the main source of flexibility. Sector integration is mentioned, but without implementation details. The NECP mentions energy communities, but does not provide an updated legislative framework. The plan does not address issues like PPAs, permitting, and quantifying flexibility needs. The NECP lacks consistency with its RRP, not providing any substantial reference on energy projects granted by the RRP.

IRELAND



Inclusion of a target for storage









Ireland's NECP plans to increase battery storage installations up to 1.7 GW of long-duration energy storage by 2030. It emphasises the need for faster permitting procedures, with a digital portal to be implemented in the future. It promotes the development of energy communities, envisaging financial funding, but without a specific timeline. The NECP discusses sector integration, but does not address issues like PPAs, and assessing flexibility needs. The latest NECP, even if it mentions the need to foster research in storage systems, does not accurately reference specific projects in the RRP.

ITALY



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Italy's latest NECP discusses sector integration, but it does not discuss quantifying flexibility needs, and updating the storage target. It strengthens the legislative framework of PPAs with the expected creation of a single national platform. The plan also addresses a single digital gateway for simplifying permitting procedures, which is still under definition. The plan foresees a reform of the legislative framework for additional funding measures for energy communities , but it still needs to be implemented. The NECP aligns with the RRP by detailing funded measures. Interestingly, the plan includes policies to foster flexibility in allowing consumers and self-consumers to have easier access to the energy market, but details are not provided.





Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Latvia's latest NECP aims to deploy up to 60 MW of residential and commercial storage installations by 2030. The plan refers to the future development of integrated electricity, gas, and district heating systems, reflecting initial steps toward sector integration. While permitting is mentioned, detailed implementation plans remain limited. It also sets out guidelines for supporting energy communities a tailored legislative framework still to be implemented. The plan does not address issues like PPAs, and assessing flexibility needs. The NECP aligns with the RRP by detailing funded measures. Interestingly, the plan foresees the deployment of smart meters at the national level, without providing further details.

LITHUANIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Lithuania's latest NECP acknowledges the importance of energy storage, with the frequency restoration reserve (FRR) market expected to increase from 700 MW in 2024 to 1238 MW in 2030. A resource gap of at least 300 MW in 2027 is expected to be covered by 300 - 600 MW of additional storage capacity by 2030. The plan discusses sector integration, without providing implementation details. For permitting, simplified procedures are expected to apply to RES producers active in a small-scale market. The NECP introduces measures for enhancing the role of energy communities, such as simplified rules to enter the energy market, but does not address issues like PPAs, assessing flexibility needs, and setting a target for storage. The latest NECP, even if it mentions the need to foster consumers to self-produce and store electricity, does not accurately reference specific projects in the RRP.

LUXEMBOURG



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Luxembourg's latest NECP confirms energy storage as a key priority, maintaining the target of 5 GW of storage capacity by 2030, as mentioned in the previously drafted NECP in 2024. The plan discusses sector integration, but does not address how to quantify flexibility needs. It supports the future of PPAs, through new regulatory tools to foster the use of long-term contracts. The NECP promotes simplifying permitting procedures through an expected revision of legislation, and the draft of specific guidelines. It strengthens the legal framework for energy communities and self-consumption, even if these measures are still to be implemented. The NECP aligns with the RRP by detailing funded measures.

MALTA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience plans



Malta's latest NECP acknowledges the importance of energy storage, listing two upcoming utility-scale battery systems and upcoming incentives for residential storage installations.









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The plan proposes simplifying permitting procedures through a digital one-stop shop to be finalised. The plan discusses energy communities, referring to an ongoing study to foster them in a limited-scale energy market. The NECP mentions PPAs, but does not address issues like sector integration, quantifying flexibility needs, and setting a target for storage. The NECP aligns with the RRP by detailing funded measures. Interestingly, the plan also confirms the deployment of a second interconnector with Italy to boost energy security, and the completion of a national smart grid, including an upgrade to second-generation smart meters to improve consumer energy management.

NETHERLANDS



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





The Netherlands' latest NECP recognises the importance of energy storage, as highlighted in the Nationaal Plan Energiesysteem (2023). The plan discusses sector integration, but does not address issues like PPAs, quantifying flexibility needs, and setting a target for storage, which are expected in 2026. The NECP supports energy communities through fiscal incentives for self-consumption to be foreseen in the future, and it includes measures to simplify permitting procedures for renewable energy projects, even if a deadline has not been set yet. The NECP aligns with the RRP by detailing funded measures.

POLAND



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Assessment of the Latest Updated NECP for Poland still to be published by the European Commission as of June 2025.

PORTUGAL



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system



NECPs' consistency with Member States' Recovery and Resilience



Portugal's latest NECP raises its 2030 battery storage target to 2 GW, compared to 1 GW target found in the Drafted Updated NECP; it reaffirms a 3.9 GW pumped hydro storage target by 2030. It strengthens the legal framework for PPAs, through simplified procedures and better access to information. The NECP foresees dedicated digital contact points for permitting procedures, even if a timeline is not specified. The plan also outlines a clearer framework for energy communities and self-consumption, with regulatory developments to be adopted. The plan discusses sector integration, but it does not address how to quantify flexibility needs. The NECP aligns with the RRP by detailing funded measures.

ROMANIA



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Romania's latest NECP introduces a target of 1,2 GW of battery storage and 800 MW of pumped hydro storage by 2030. The plan mentions sectoral integration, but lacks details. The plan also foresees measures to simplify permitting procedures through one-stop shop contact points, still to be implemented. It outlines a dedicated legislative framework for energy communities to be developed in the future. The NECP does not address issues like PPAs, and quantifying flexibility needs. While the NECP references some RRP investments, such as storage for residential use, it fails to outline other significant energy projects.





Inclusion of a target for storage



Measures to strengthen the resilience of MS energy system NECPs' consistency with Member States' Recovery and Resilience

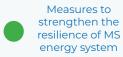


Assessment of the Latest Updated NECP for Slovakia still to be published by the European Commission as of June 2025.



Inclusion of a target for storage





NECPs' consistency with Member States' Recovery and Resilience



Slovenia's latest NECP provides incentives for RES-storage, and it sets a target of 100% of frequency restoration reserve (FRR) needs through market-based services by 2030. It promotes sector integration between electricity, heating, and transport. The NECP strengthens PPAs, permitting, and energy communities' legal frameworks, all to be fully implemented shortly. The plan does not address how to quantify flexibility needs. The latest NECP refers to research in energy storage, but it does not accurately reference specific projects in the RRP. Interestingly, the plan foresees rolling out smart meters across the country by 2027, allowing consumers to manage their energy use.

SPAIN



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Spain's latest NECP sets a target of 22.5 GW by 2030 of storage systems installations, compared to the Draft Updated NECP target of 22 GW by 2030. The plan promotes PPAs through easier public procurement rules for consumers to access public investments. The NECP also acknowledges the need to simplify permitting procedures through guidelines, but details remain to be clarified for both measures. The role of energy communities and self-consumption is being reinforced through a newly updated legislative framework for accessing the electricity market through secure fixed-price contracts, still to be implemented. The plan discusses sector integration, but it does not address how to quantify flexibility needs. The NECP aligns with the RRP by detailing funded measures.

SWEDEN



Inclusion of a target for storage



Policies to enable PPAs, improve permitting, selfconsumption



Measures to strengthen the resilience of MS energy system





Sweden's latest NECP strengthens the legislative framework for sector integration by proposing tax reduction for the installation of self-generated electricity storage systems in buildings. The plan also references permitting processes, without providing details. The NECP highlights the role of energy communities, referring to an ongoing study on how to enhance market conditions in the national energy system. The plan does not address issues like PPAs, quantifying flexibility needs, and setting a target for storage. The latest NECP does not provide abundant details about its consistency with RRP. Interestingly, the plan foresees the future installation of small-scale grids to enhance flexibility at the local level.



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