



State Aid: Overview of Spanish Scheme to Support the Development of Innovative Electricity Storage Projects

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1. Background

On 7 July 2023, the European Commission approved with the decision [SA.103068](#) a €350 million Spanish scheme to support the construction and operation of innovative electricity storage facilities through the Recovery and Resilience Fund (RRF). The measure aims to: (i) increase the share of renewable energy sources in the Spanish electricity system, (ii) decrease the level of curtailments, and (iii) support the secure operation of the Spanish electricity system.

The support scheme is introduced in alignment with Spain's National Recovery and Resilience Plan (RRP), which incorporates the deployment of energy storage as one of its measures.¹ The objective is to award and operate a minimum of five innovative storage projects, collectively amounting to an installed capacity of at least 600 MW or an equivalent total capacity in MWh. The scheme is also in line with the [final National Energy and Climate Plans \(NECP\) of Spain](#), submitted in 2019, which sets a target of more than 122 GW of installed capacity for renewable electricity generation and a goal of adding 6 GW of storage by 2030.² Overall, the scheme will contribute to the decarbonisation of Spain's electricity system in the medium term and facilitate the introduction of a large volume of new Renewable Energy Sources (RES) generating capacity, aiming at 74% share of RES in the electricity generation mix in 2030. Additionally, the support scheme is expected to benefit the electricity system of Spain's island regions, including the Balearic and Canary Islands. Although such areas have a favourable RES potential, network expansion is either not feasible or not optimal. Storage facilities, however, can mitigate network congestion and potentially defer or avoid network investments.

¹ Revised Annex to the Council Implementing Decision on the approval of the assessment of the recovery and resilience plan for Spain, pp. 80 and 84, available [here](#).

² The draft updated NECP, submitted in June 2023, sets a target of 81% renewable electricity generation and 22 GW of installed storage capacity by 2030. The Plan also set a goal of achieving 160 GW of installed capacity for renewable generation.

2. Analysis of the Measure

The state aid scheme intends to support investments in innovative electricity storage facilities for an aggregate installed power of at least 600 MW or equivalent total capacity in MWh. Spain aims for a total tendered power between 500 and 1500 MW, considering the various storage technologies that may participate and their potential location, either mainland or island

systems. The measure is open to all electricity storage technologies, following the technology-neutral approach of the Spanish Energy Storage Strategy.³ Additionally, a predefined budget share is allocated to the island systems to foster projects specifically in these areas, addressing challenges, such as the limited electricity connection to the mainland system and specific storage needs, particularly for storing excess renewable electricity and preventing potential curtailment.

2.1. Duration of the Measure

- The projects must be selected through the tendering process before the end of 2024 at the latest.
- The storage facilities must enter operation before the end of June 2026 at the latest, except for pumped-hydro facilities, which require more time to be developed and will enter operation before the end of 2030 at the latest.

2.2. Aid Offered

The scheme provides aid in the form of an *investment grant*, expressed in EUR, to finance part of the eligible costs of the selected storage projects. The investment grant will be limited to the funding gap declared by the selected projects (pay-as-bid). It will be equal to the bids of the selected projects, expressed in EUR/MW of installed power, EUR/MWh of installed capacity, and requested aid intensity (i.e. the ratio between funding gap and eligible costs). The bid must be lower than or equal to the declared funding gap, representing the share of eligible costs not covered through the revenues from the electricity markets.

³ The Energy Storage Strategy was published in February 2021.

Selected projects may request advance payments of up to 80% of the investment once the grants have been awarded. To receive advance payments, applicants must provide financial guarantees. The remaining investment grant will be disbursed once the projects are finalised and related verifications, including completion of construction works, compliance with national and EU environmental standards, and RRF-related requirements, have been completed.

Definition of costs:

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| <ul style="list-style-type: none"> ○ The eligible costs cover all investments required to carry out the storage project, including engineering, construction, acquisition, rental, and leasing of construction equipment, commissioning, testing, verifications, quality controls, project management, health and safety coordination, and application-related costs. Funding may also cover the implementation of the energy storage system, auxiliary equipment, and electrical connections required to evacuate the electricity of the facility to the distribution of transport networks. |
| <ul style="list-style-type: none"> ○ Costs excluded from the scheme include taxes, financial interests, land and building purchases or rentals, modifications to existing infrastructure, personnel expenses, responsibilities set before the aid was granted, and elements required from the beneficiary to receive the grant. |

2.3. Budget and Financing

- The maximum budget amounts to €350 million. It also includes a predefined share for the island systems. The budget will be disbursed as follows:

Call for tender	Budget	Budget for the island system
1 st call	€150 million	€19 million <ul style="list-style-type: none"> • €4 million → Balearic Islands • €15 million → Canary Islands
Subsequent call(s)	€200 million	Depending on the profile of projects received under the 1 st call.

- The measure will be entirely funded by the Recovery and Resilience Facility (RRF). The Institute for Diversification and Saving of Energy (IDAE) will be the competent granting authority.

2.4. Competitive Tendering Process

The total budget of the scheme will likely be tendered in **two rounds**, with specific tender rules, including eligibility and award criteria, to be set before each round.

- The Ministry for the Ecological Transition and the Demographic Challenge, and the Institute for Diversification and Saving of Energy (IDAE) are responsible for setting the parameters of the tender process, the eligibility criteria, and the award process. IDEA is also responsible for organising the tenders.
- No maximum bid price will be set. According to the Spanish authorities, setting a maximum bid price is unnecessary for several reasons: (1) there's already a cap on the aid awarded per undertaking; (2) fluctuating commodity and labour costs make it difficult to establish a suitable cap, which could rapidly become outdated; (3) the cost structures of competing technologies vary significantly; and (4) the selection process incentivises projects with lower unitary costs.

Nonetheless, a maximum financial support per project and aid intensity will apply as follows:

Maximum financial support	Aid intensity	
40–65% of the total eligible project costs, depending on the size of the beneficiary undertaking and the location of the storage project	up to 60% for small companies	+ increase by 5% in each case for storage projects located in the island systems, to take into consideration their specific needs and their higher funding gap.
	up to 50% for medium companies	
	up to 40% for large companies	

- A lowest-price threshold will not be established. According to the Spanish authorities, there are cost references to assess the selection criterion on “economic viability” (see below, under Selection of beneficiaries – Assessment) and avoid collusion.

2.5. Conditions for Participation

2.5.1 Eligibility Criteria

- ✓ Eligible types of projects:

(1) innovative electricity storage projects connected to the (transmission or distribution) grid and based on any technology (BES, pumped hydro, thermal storage, etc.), and
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(2) electricity storage projects hybridised ⁴ with renewable energy generation. In this case, the measure would apply to the electricity storage asset only.

Hybrid storage projects that might combine various electricity storage technologies are also eligible for participation.
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- ✓ Capability of the beneficiaries to participate directly in all electricity markets currently operating in Spain, and particularly in the balancing markets as balancing service providers. For island systems, they are only required to be capable of participating directly in all electricity markets currently operating on the respective island.
- ✓ A score of at least 20 % of the maximum score on the selection criteria “project feasibility”, “enabling technical characteristics for the integration of renewables” and “externalities” related to socioeconomics brought by the project (see below, under Selection of beneficiaries – Assessment).
- ✓ The start of works or the final investment decision on the project should not take place before the beneficiary’s aid application, i.e. before the submission of the bid.

The exact eligibility criteria applicable to each tender will be set well in advance ahead of the tender.

2.5.2 Other Requirements

- ✓ A minimum power of 1 MW, or a minimum energy capacity of 1 MWh.
- ✓ Connection to transmission or distribution lines, enabling electricity injection and withdrawal.
- ✓ Minimum capacity requirements for providing services with a duration of two hours, to exclude severe functionality limitations due to energy capacity-related constraints.

⁴ Defined in the Spanish Royal Decree 23/2020, as “*incorporated storage facilities that may evacuate electricity using the same connection point and access capacity already granted, provided that the new facility complies with the technical requirements applicable to it*”.

- ✓ Fulfilling technical and prequalification requirements applicable to all facilities of similar characteristics, defined by the Ministry for the Ecological Transition and the Demographic Challenge and IDEA.
- ✓ For projects in the island systems, fulfilling specific technical requirements related to the island power systems.

2.6. International Participants

No mention.

2.7. Selection of Beneficiaries

- ✓ Assessment

For the selection of the beneficiaries, all projects will be assessed based on the following 4 criteria with different weights:

Criterion	Weight
Economic viability	35%
Enabling technical characteristics for the integration of renewables	25%
Project feasibility	10%
Externalities	30%

Description of the criteria
<ul style="list-style-type: none"> • <i>Economic viability</i>: assesses the cost-efficiency and the need for funding of each project. It combines the ratio of eligible costs to project storage power and capacity, and the aid intensity, i.e. the ratio between requested aid and eligible cost. The assessment of these criteria takes into consideration the maximum and minimum price and intensity of eligible bids, as well as the reference costs established by the Spanish authorities for an electricity storage project.
<ul style="list-style-type: none"> • <i>Enabling technical characteristics for the integration of renewables</i>: assesses the ability of each project to provide stability to the power system and facilitate the integration of renewables into the power system. It combines technical sub-criteria, including the efficiency of a full charge/discharge storage cycle, the storage discharge duration and speed, and the ability of storage to provide various technical services to the power system, such as inertia, frequency restoration reserve ("FRR"), reactive power, short-circuit power, black start capacity, residual capacity at the

<p>end of the duration of the measure, etc.</p> <p>► The relative weights of the sub-criteria differ between the rankings for island systems and the standard rankings due to different operational constraints between island and mainland systems. The overall weight (25%) remains the same for both cases.</p>
<ul style="list-style-type: none"> • <i>Project feasibility</i>: assesses the capacity of applicants to carry out the project successfully, and following the RRP timeline for component C8.I1: Deployment of energy storage. This assessment takes into consideration the quality of the project plan, the team capacity and experience with previous energy projects, the existence of a proper risk-management plan, project control, and completion milestones, including whether the administrative and environmental authorisations have already been obtained.
<ul style="list-style-type: none"> • <i>Externalities</i>: assesses the socioeconomic externalities that the project will bring. These externalities include job creation, avoidance of depopulation of rural areas, environmental aspects and circular economy (e.g. recycling), gender equality, participation of small and medium-sized enterprises (SMEs), and management of critical raw materials.

✓ Ranking

- (1) Energy storage projects will be assessed and ranked separately within each island system. Projects within each island system will be ranked and selected, starting from the best-ranked project, up to the specific budget dedicated to the island.
- (2) The remaining projects will be jointly ranked and selected up to the remaining budget. Mainland projects will be graded based on the mainland weights of sub-criteria, and island projects will be graded based on the island weights of sub-criteria.
- (3) There will be a minimum budget for projects to be finalised by 2026, to ensure the achievement of the RRP milestones and targets.

2.8. Measures to Avoid Overcompensation

- Spanish authorities will assess each project in detail, based on unit costs per MW and per MWh, along with total costs. This assessment allows comparison among similar projects, enabling the definition of standard metrics and the minimum necessary aid.
- Each project must provide a business plan, the assessment of which will ensure that the requested aid is lower than or equal to the funding gap of the specific project. If the aid intensity that is required based on the business plan is lower than the aid intensity requested in the application, the aid granted will be reduced and adjusted to the aid intensity required based on the business plan.

- The aid per undertaking will be capped as follows:
 - (a) a maximum aid per undertaking per project of EUR 50 million; and
 - (b) a maximum aid per undertaking per tender of EUR 50 million.

This cap will apply to projects located in the island systems as well.

- The aid intensity is determined by the size of the beneficiary (see also table under section “Competitive tendering process”):

Aid intensity		
Company size	Mainland system	Island systems
Small companies	60%	65%
Medium-sized companies	50%	55%
Large companies	40%	45%

- The measure may be combined with other forms of support, provided they do not cover the same eligible costs. For this reason, beneficiaries will be required to disclose other aid schemes, revenues, resources, or any other financial mechanism covering the same activities before receiving the grant. The grant amount will be adjusted accordingly to prevent overcompensation and ensure compliance with the maximum aid intensities and amounts.

2.9. Compatibility with the EU Legislation

The European Commission established the presence of State aid in the Spanish scheme based on Article 107(1) TFEU and assessed its compatibility according to Article 107(3)(c) TFEU and the 2022 Guidelines on State aid for climate, environmental protection and energy (‘CEEAG’), specifically the general compatibility provisions of CEEAG (set out in section 3 CEEAG), where applicable, and the specific compatibility criteria for aid for energy infrastructure (section 4.9 CEEAG).

In detail, the conditions assessed by the Commission and its conclusions:

(1) Positive condition: the aid must facilitate the development of an economic activity.

- ✓ *Identification of the economic activity and positive effects of the scheme:* The scheme aims at developing electricity storage facilities in Spain, thus contributing to the development of a specific economic activity. Additionally, the deployment of electricity storage aligns with Spain’s Resilience and Recovery Plan (RRP) and supports the objective of reducing greenhouse gas emissions, in line with the EU Green Deal. The scheme will enable the smooth integration of a higher level of penetration of RES in the

Spanish electricity system with a reduced level of curtailments. It will also improve the operational security of the Spanish electricity network by providing additional services, including flexibility and ancillary services, and potentially network congestion relief services.

- ✓ *Incentive effect:* Without the aid, investors would not have the appropriate incentive to undertake the investments in building the required electricity storage facilities. Spain has submitted that, based on current market forecasts, market revenues alone would not ensure the financial viability of these projects, hindering stable integration of renewable energy, congestion management, and grid stabilization.
- ✓ *No breach of EU law:* The supported activity, the scheme, and its conditions were found compatible with the internal market and the EU legislation in the energy sector.

(2) Negative condition: no distortion of competition in a way contrary to the common interest.

- ✓ *Minimisation of distortions of competition and trade:* The measure affects mainly the Spanish electricity market and might affect neighbouring countries, because of the cross-border interconnections. The following conditions are met:
 - *Necessity:* When market operators cannot provide needed infrastructure, State aid may become necessary to address market failures and meet infrastructure needs. In the case of Spain, without aid, the required investments in storage facilities would not be delivered in time or to the extent necessary to meet the country's electricity storage needs. State aid is needed to bridge the funding gap and foster the development of the required storage capacity, crucial for increasing renewable energy penetration. Additionally, the aid is necessary to mitigate curtailment issues faced by renewable energy generation in Spain, ensuring the sustainability and viability of investments in renewable energy. Considering the absence of a capacity mechanism, high and front-loaded investment costs, lack of remuneration for frequency containment reserve ("FCR"), and revenue challenges, the Commission concluded that aid is necessary for the development of energy storage facilities in Spain.
 - *Appropriateness:* The scheme is an appropriate policy instrument to address market failures and finance the funding gap. It provides short-term flexibility to the Spanish system, enabling an increased penetration of variable renewable energy sources. The investment grant is expected to incentivise the projects' participation in the market to maximise operational profits, as well as to avoid overcompensation.
 - *Proportionality and Cumulation:* The investment grant, set beforehand for every project, aims to cover the same aid per MW of installed power. Proportionality is evaluated based on the funding gap principle, comparing the aid to the counterfactual scenario without it. The assumptions regarding projected costs and

the Weighted Average Cost of Capital (WACC) were considered credible, reflecting current market conditions. Additionally, the Commission found the funding gap realistic for SMEs and island systems, considering their limited access to capital and higher storage costs.

- *Transparency:* Spain is committed to publishing relevant data on a national website linked to the Commission's transparency register.
- ✓ *Limited risk of undue negative effects on competition and trade:* The storage facilities are subject to full internal market regulation. Regarding the risk of competition distortions in related services markets and other energy markets, the Commission found that Spain has only a limited number of battery storage facilities installed while the scheme is open to various storage technologies. The measure is, thus, expected to foster competition. Additionally, it integrates sufficient incentives for effective participation in all electricity markets. Anti-concentration rules aim to support multiple independent entities in the market, fostering competition. The scheme incentivises market participants to maximise revenues without negatively impacting competition in ancillary services markets. It also doesn't impede the development of future system services markets.

The European Commission found that the measure is designed to minimise competition distortion, ensuring that its positive effects outweigh potential negatives. It concluded that the scheme facilitates economic activities of energy storage in Spain while supporting the clean energy transition, and ensuring grid stability and societal benefits.

Sources

Legislation/Decision	Competent authority	Issuance date	Description
<u>Decision SA.103068:</u> “RRF – Spain: Support for innovative electricity storage projects”	European Commission	07.07.2023	Approval of state aid scheme

About EASE:

The European Association for Storage of Energy (EASE) is the leading member - supported association representing organisations active across the entire energy storage value chain. EASE supports the deployment of energy storage to further the cost-effective transition to a resilient, carbon-neutral, and secure energy system. Together, EASE members have significant expertise across all major storage technologies and applications. This allows us to generate new ideas and policy recommendations that are essential to build a regulatory framework that is supportive of storage.

For more information please visit www.ease-storage.eu

Disclaimer:

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