



EASE Position Paper on the Renewable Energy Directive Revision

Brussels, March 2022



Unleashing Flexibility Needs: How Energy Storage Can Make or Break the Case for Renewables

Executive Summary

The review of the Renewable Energy Directive (REDIII) is a great opportunity to speed up decarbonisation efforts in the energy system: EASE welcomes the 40% renewable energy targets for 2030, but calls for clearer support for energy storage as a flexibility enhancer, vital tool for system stability and operation in a renewable based energy system, and the only technology capable of shifting large quantities of energy. Energy storage systems, both co-located and standalone, should be incentivised to enhance the benefits of increased renewable energy generation, because the large-scale deployment of renewables will become environmentally efficient and cost-effective only by avoiding curtailment, and providing flexibility and resilience to the grid. Storage is proving itself to be a key actor in the new energy system, and only an apt legislation can maximise its contribution to the transition.

These are the necessary steps to be urgently taken to promote faster emission reduction over the next decade:

- 1. A strategy for energy storage:** Establishing a dedicated Stakeholders' Committee to develop a sound methodology assessing flexibility and energy shifting needs. RED III can foresee better aligned national energy and climate plans which take energy storage needs into consideration, with the Stakeholder Committee submitting recommendations to the Commission and possible EU-level energy storage targets.
- 2. Fair and proportionate support schemes:** Defining co-located energy storage facilities will reinforce the energy storage business case by clarifying the position of storage systems owners and operators. Member States shall open up support schemes and simplified RES procedures to include energy storage facilities - while taking into consideration that both co-located and standalone storage are essential flexibility providers.
- 3. Transparent and robust contracts:** Power purchase agreements (PPAs) regulatory frameworks should favour renewables + storage, to minimise risks and maximise flexibility: storage systems allow time-match consumption and availability and minimise risks associated with a renewable PPA. This would work only if supported by a framework allowing for the certification of stored renewable electricity.
- 4. Ambitious energy system integration provisions:** Storage technologies must be promoted as essential to decarbonise the heating and cooling as well as building sectors in steps taken by Member States. Administrative burdens (such as certification, authorisation) for aggregated mobile energy storage systems must be avoided to be able to reach their full potential to provide energy shifting. It is essential that energy system planning exercises include energy storage technologies to ensure efficient renewable energy integration.

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1. A Strategy for Energy Storage

1.1. Ambitious Renewable Energy Targets Make Certain the Need for Energy Storage Targets

In order for these renewable energy targets and climate neutrality 2050 to be met, future energy system flexibility and energy shifting needs must be assessed and energy storage targets must be set to guide technological and market development. Therefore, EASE proposes to:

- **Establish a Stakeholder Committee for Flexibility and Energy Shifting Scenarios**, consisting of a range of representatives in energy storage, demand response, transport, heating and cooling, and system operators, with ACER as its chair. System operation, stability, restoration, and resilience need to be taken into consideration.
- **Develop a methodology to assess future flexibility and energy shifting needs**, through consultation with the Stakeholder Committee for Flexibility Scenarios, taking into account a high penetration of distributed renewable energy sources, differing energy shifting timescales, seasonal variations, changes in climate, and energy scarcity periods. The role of storage as stabilization tool in ancillary services, capacity markets and for system operation, including constraint management, in a renewable based energy system needs to be accounted for.
- **Develop an EU-wide Flexibility and Energy Shifting Scenario**, through consultation with the Stakeholder Committee for Flexibility Scenarios, forecasting until 2050, aligned with 2030 and 2050 EU climate and energy targets.
- **Ensure National Energy and Climate Plans take the scenarios into consideration**, highlighting key policies to support energy storage.
- **Consider the findings of the Stakeholder Committee**. The Stakeholder Committee may draw up a list of recommendations to the Commission, including an EU-level energy storage target. The Commission must also take the scenarios into consideration when developing its future energy scenarios.

2. Fair and Proportionate Support Schemes

2. 1. Energy Storage as the Missing Link to Effective RES Deployment

Onsite coupling of energy storage technologies with renewable energy sources have provided cost-effective decarbonisation solutions across Europe, supporting system efficiency through reduced energy curtailment [1]. However, there is little harmonisation between Member States on a definition of co-located energy storage as no definition currently exists in EU legislation. In order to clarify how co-located storage facilities qualify under support schemes, how projects should be carried out, and how permitting procedures could be simplified, new definitions would be required. Therefore, EASE proposes to:

- **Define a co-located storage facility**, making sure that such definition is harmonised with the Electricity Market Directive 2019/944, and highlighting that the facility and the source or sources of renewable energy must be connected behind the same grid connection point. Energy flows within a co-located system must be treated equally and in a non-discriminated manner.

2. 2. Ensuring Energy Storage is Explicitly Included in Support Schemes and Simplified Procedures for a Fast and Harmonised Development Across Member States

Support schemes are important to maximise the integration of electricity from renewable sources, however Art. 4 and 5 of RED II have not been revised in the proposal and any explicit mention of energy storage remains absent. Depending on Member State interpretation and implementation, Art 4 may provide space for support schemes including energy storage systems. However, when the integration of renewable energy sources is supported by public funding, it is essential to clarify how that support should take place and who exactly can benefit from it, in order to provide regulatory and market certainty. Therefore, EASE proposes to:

- **Clarify the possibility of opening support schemes to co-located facilities.** Article 4 should be amended to include electricity that was previously stored in energy storage systems under the general support schemes for renewable electricity's framework to maximise the integration of renewable sources in the electricity market. This should be done coherently with the State Aid Guidelines (CEEAG) provisions on the matter, and therefore avoiding double aiding the same energy flow.
- **Include energy storage in joint projects.** Projects between Member States or Member States and Third Countries should be open to both standalone and co-located energy storage.
- **For islands and outermost regions** in particular, there should be more focus on support schemes considering energy storage, since there are fewer alternative flexibility options available.

[1] "In order to keep the balance between the production and consumption and avoid RES curtailment, additional flexibility solutions will be needed. In this context, storage solutions could play a key role to ensure the integration of renewable energy sources can materialise at the lowest cost, by shifting the consumption to the moment when electricity is available". European Commission (2017) Study on energy storage. Contribution to the security of the electricity supply in Europe. Full text can be found [here](#).

- **Ensure renewable energy projects with co-located storage would be able to compete and be considered in renewable energy tenders** alongside renewable energy projects without co-located storage, if not otherwise indicated in the tender call, without undue administrative and regulatory barriers. Co-located storage can balance intermittent generation to produce a more reliable power source, and can tackle grid congestion issues. Energy storage technologies should be eligible for consideration on a technology-neutral basis. Projects which use energy storage facilities to directly support the integration of the energy produced by a renewable source should also be considered.
- **Support projects which use energy storage facilities to directly support the integration of the energy produced by a renewable source** through managing congestion on the surrounding grid or on the onshore grid to which an offshore renewable energy source is connected.
- **Make sure clear roadmaps with specific timings for the different European markets are adopted** to implement the different regulatory mechanisms that should improve revenue streams of these assets, ensuring harmonisation among Member States.
- **Incorporate energy storage, including EVs, in planning exercises.** Competent authorities at the national, regional and local level should include provisions and planning for the integration of energy storage in exercises mentioned in Article 15(3) when it supports the integration or development of renewable energy sources.

3. Transparent and Robust Contracts and Fair Certification

3.1. Long-Term Hybrid Ppas Can Lead the Market Uptake of Energy Storage Systems (ESS) – But They Need to Be Recognised First

The market for renewable power purchase agreements (PPAs) [2] is rapidly growing. PPAs can also include the possibility of storing the electricity that is being traded, to minimise risks related to a renewable PPA and/or ensure time-matching renewable energy consumption; this is especially important in the case of corporate PPAs for energy-intensive industries that need electricity readily available 24/7 (e.g. steel) The REDIII proposal does not explicitly envision this possibility, and this poses the risk of under-regulated and poorly harmonised PPAs frameworks in Member States. Therefore, EASE proposes to:

- **Recognise renewables + storage power purchase agreements in article 15(8)**, allowing for both co-located and standalone facilities to be part of a PPA.
- **Make it possible for Member States to create a favourable regulatory, administrative and fiscal framework for renewables + storage contracts**, that would signal the maximised flexibility performance of the PPA. This should be done by also clarifying that PPAs should be an alternative way of developing RES production complementing national support schemes: therefore, access to forms of government-backed credit risk guarantee - set up to promote corporate PPAs - should not be granted to projects already subject to Feed-in-Tariffs or Contracts for Difference.
- **Promote a minimum duration of 10 years for renewables + storage contracts** to ensure certainty of revenues for project promoters.
- **Ensure renewables + storage PPAs can transfer Guarantees of Origin directly to the buyer**, by expanding Article 15(8). Member States should in any case be allowed to set up safeguards to avoid market distortion for installations that already receive public funding.

3.2. Renewable Electricity Must Be Certified Even When Stored, through a Sound Methodology That Avoids Double-Counting

REDIII does not foresee a specific framework for Guarantees of Origin (GoOs) and renewable energy (“green”) certificates when renewable electricity is stored, neither at production level nor in standalone facilities. Producers, buyers and consumers alike may not receive the correct market signals if they face challenges when generating, trading and consuming renewable electricity that has previously been stored and therefore may not have been issued GoOs.

- **Co-located storage facilities should not face barriers in being issued guarantees of origin and green certificates**, as they receive the electricity directly from the RES. Article 19 should clarify that electricity produced in co-located facilities has the same rights as that produced in standalone RES facilities.

[2] Power purchase agreements are long-term agreements to purchase energy from a specific asset at a predetermined price between a developer and a consumer — generally a company requiring large amounts of electricity — or between a developer and a supplier who then resells the energy. More information on power purchase agreements [here](#).

- Furthermore, **stored RES must be allowed to feed an electrolyser and produce renewable hydrogen**, provided that the storage installation can demonstrate that the stored energy is renewable. An electrolyser could be fed by multiple RES installations (e.g. wind or solar), but also by renewable energy storage (e.g. batteries or pumped hydro storage) located both behind-the-meter and in front of the meter. The storage can flatten the electrolyser's consumption profile, resulting in higher operating hours and reducing the production cost, which is critical for an effective decarbonisation of hard-to-electrify uses.
- A **methodology to avoid double counting needs to be developed** by Member States, in order to correctly issue green certificates for electricity withdrawn from the public grid and subsequently re-injected. Such methodology should be based on renewables volume-in and volume-out, and the guiding principles need to be set in the Directive to avoid poor harmonisation.

4. Ambitious Energy System Integration Provisions

4. 1. Energy Storage at the Forefront of a Decarbonised Heating and Cooling Sector

Previously neglected in the REDII, the REDIII proposal recognises the role thermal energy storage technologies can play in providing flexibility in district heating and cooling networks. Member States would now have to consider thermal energy storage following their assessment of building new infrastructure for district heating and cooling produced from renewable sources in their NECPs. While this is a step in the right direction, more needs to be done to unlock the role storage can play in the heating and cooling sector. Therefore, EASE proposes to:

- **Include installation of thermal energy storage technologies in the list of recommended measures** for heating and cooling systems in buildings and industrial processes, in Article 23 of the RED III.
- **Encourage the connection of other energy storage technologies to heating and cooling systems.** Many storage technologies outside of the thermal family consume and produce heat and cold during the process of energy storage and can in fact increase energy efficiency rates if permitted access. Amending Article 24(6) to allow easier connectivity of different storage technologies would greatly support energy system integration and flexibility.

4. 2. Take Further Steps to Ensure Prosumers Can Participate in the Electricity Market Through Vehicle-to-Grid

The REDIII proposal finally introduces a definition for smart charging and bi-directional charging, which are essential to unlock the potential flexibility of electric vehicles. EASE welcomes the assurance that national frameworks shall not discriminate against EV participation in electricity markets, aggregated or not. However, more is needed to avoid administrative barriers. Therefore, EASE proposes to:

- **Maintain the provisions in Article 20a in the final REDIII text**, in order to ensure effective integration of battery capacity in the electricity system.
- **Remove administrative burdens of aggregated EVs participating in all electricity markets**, by amending Article 15, ensuring that proportionate and necessary authorisation, certification and licensing procedures are also applied to aggregated EV schemes.
- **Clarify that renewable energy communities can own and operate EV fleets and can participate in aggregated flexibility through smart charging and bi-directional charging**, by expanding Article 22.
- **Reword the definition of bi-directional charging at Article 2(14n)** to be based on electrical current, rather than charge. This better reflects scientific terminology and provides clarity.

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, low-carbon, 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:

This response was elaborated by EASE and reflects a consolidated view of its members from an energy storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.

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