Energy Storage Coalition

SHAPING THE FUTURE OF ENERGY STORAGE

Policy priorities for 2024 – 2029

Why renewables need energy storage

The more renewables you integrate in the energy system, the more you need energy storage. Energy storage technologies play a vital role by storing excess renewable energy generation and releasing it when demand peaks.

They serve as a complementary tool for the widespread deployment of renewables, facilitating the transition away from fossil fuels and aiding in the achievement of the EU's carbon-neutral objective by 2050.

To achieve this objective, it is imperative to bridge the massive gap in energy storage capacity, deploying it rapidly and at a large scale to meet the projected demand of 200 GW by 2030. This urgency is underscored by a study published by the European Commission's Joint Research Centre in June 2023 which anticipates that the integration of renewables will necessitate flexibility requirements to more than double by 2030 and grow sevenfold by 2050 compared to 2024.

200 GW
= energy storage capacity needed by 2030

7
= times flexibility requirements need to grow by 2050

Energy storage technologies: a variety of choices for a variety of needs

A diverse array of energy storage solutions is already available and will be required to address a variety of challenges on different timescales.

Energy storage solutions encompass a wide range of technologies such as lithium-ion batteries, pumped hydro storage, compressed air energy storage, flywheels, each offering unique advantages suited to specific applications and timeframes within the energy landscape.

-90%
= EU target for reduction of GHG emissions by 2040

For example, electrothermal energy storage stands out for its capacity to electrify heat while storing energy, making it well-suited for meeting the continuous and large-scale heat demands of industrial sites. Together with other solutions, it plays a vital role in a holistic approach to grid stability and renewable energy integration.

Other innovative long-duration energy storage technologies are also able to ensure reliable power supply during extended periods of low renewable energy generation or high demand.

Additionally, fast-response technologies, like supercapacitors, provide rapid energy discharge when needed, further enhancing grid flexibility and resilience.

What do we do now?

Energy storage deployment continues to face obstacles, including the absence of long-term market signals and long-term contracts, barriers to permitting and accessing support measures, and discriminatory grid fees and double taxation that diminish the attractiveness of energy storage projects to investors, hindering their ability to keep pace with the rapid deployment of renewable energy.

Therefore, we need decision-makers to work on clear energy storage strategies, and create an effective policy design that will support the fast deployment of energy storage. it is time to act and:

- make room for renewables over fossil fuels
- remove unnecessary burdens on energy storage
- help citizens and industries go green

Make room for renewables over fossil fuels

Financial incentives at both the EU and national levels continue to disproportionately favor fossil fuels, discouraging investment in cleaner alternatives and hindering the transition to a carbon-neutral energy future.

This sends a negative signal to investors and innovators, creating an uneven playing field and impeding the deployment of crucial non-fossil alternatives essential for integrating renewable energy sources into the grid and meeting climate goals effectively, such as energy storage technologies.

An example of this can be observed analysing the scope of Capacity Remuneration Mechanisms, a financial instrument that ensure that electricity demand can be met at any moment.

Over the next decade, Capacity Remuneration Mechanisms, a prevalent financial incentive across Europe, will predominantly favor gas turbines through lucrative long-term contracts, impeding the development of sustainable alternatives.

A simple fix is to channel public money towards clean technologies, and exclude the most polluting assets, for instance by conditioning the obtention of public money, to carbon thresholds that need to be progressively lowered.

TIME TO ACT

WE ASK POLICYMAKERS TO LOWER THE CARBON CAP FOR CAPACITY MARKETS EU-WIDE TO REACH NET-ZERO BY 2040 AT THE LATEST.

Remove unnecessary burdens on energy storage

Simple regulatory hurdles hamper the growth of energy storage projects across Europe. When these hurdles do not also apply to fossil generators, they even put energy storage at a competitive disadvantage.

A common example of a regulatory hurdle is "double charging". This occurs when energy storage is charged both when the energy is stored and again when it is re-injected into the grid to be consumed by the end-user.

This practice imposes undue financial burdens to energy storage projects. Fortunately, several countries have already abolished double charges, recognising the need for fair treatment of energy storage within regulatory frameworks.

TIME TO ACT

WE CALL FOR A CLEAR AND PRECISE FRAMEWORK PROTECTING ENERGY STORAGE PROJECTS AGAINST DOUBLE CHARGES TO BE SUPPORTED EU-WIDE.

Help citizens & industries go green

The transition to renewable energy isn't exclusively dictated by public authorities; rather, it's propelled by the demand from numerous European industries and citizens who recognise the competitive advantages of renewables and energy storage.when it comes to enhanced safety and reduced operational costs.

To strengthen this trend, the EU's and national governments share the responsibility to design favourable frameworks to foster successful business cases and provide long-term visibility for energy storage projects.

Companies seeking to showcase their non-fossil energy usage often encounter obstacles. Additional tools are necessary to ensure their demand is met by real-time clean energy sources, leveraging renewables and energy storage in tandem.

While time-stamped guarantees of origin will soon be integrated into national regulations, additional legal clarity could strengthen their effectiveness, empowering both businesses and individuals in advancing the energy transition.

TIME TO ACT

WE CALL FOR A CLEAR EU-WIDE DEFINITION OF 24/7 RENEWABLE POWER PURCHASE AGREEMENTS.

About the Energy Storage Coalition

The Energy Storage Coalition is an organisation aimed at promoting the benefits of energy storage and advocate for a more favourable legal, financial and political framework for its deployment.

The Coalition aims at accelerating the decarbonisation of the European energy system by increasing the deployment of sustainable and clean energy storage solutions to support renewables.

The Energy Storage Coalition is constituted of four key clean energy actors: Breakthrough Energy, The European Association for Storage of Energy, SolarPower Europe, WindEurope.

Breakthrough Energy

EASE
European Association for Storage of Energy

SolarPower Europe

Wind EUROPE

Energy Storage Coalition

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