



Activity Report 2022



Acknowledgment

Special acknowledgement to the EASE members who helped make this publication possible.

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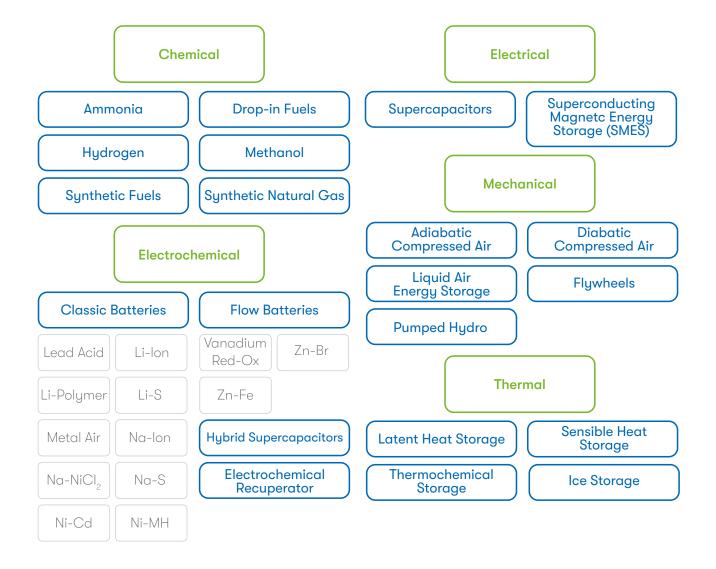
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Energy Storage Technologies

Energy storage devices are "charged" when they absorb energy, either directly from renewable generation devices or indirectly from the electricity grid. They "discharge" when they deliver the stored energy back into the grid. Charge and discharge normally require power conversion devices, to transform electrical energy (AC or DC) into a different form of chemical, electrochemical, electrical, mechanical, and thermal.

Energy storage can store surplus energy from intermittent renewable sources, such as solar PV and wind power, until it is required – allowing therefore for the integration of additional renewable energy into the system. Different energy storage systems – centralised and decentralised – consider different technological possibilities, which EASE organises in 5 energy storage classes: chemical, electrochemical, electrical, mechanical and thermal.



Energy Storage Applications

Energy storage has many valuable applications across the energy system. The range of applications which energy storage devices can provide is constantly evolving, both because of the ongoing development of new energy storage technologies, but also the evolving flexibility needs of the energy system. It is expected that the list of storage applications will continue to grow over the next few years. Most storage facilities will need to provide several services in order to have a robust business case.

Generation Support Services and Bulk Storage Services

Services to Support Transmission Infrastructure

Storage Services for RES Support RES Curtailment Minimisation Transmission Investment Deferral Transmission Support

Arbitrage

Support to Conventional Generation

Seasonal Arbitrage

Angular Stability

Capacity Firming

System Electricity Supply Capacity

Services to Support
Distribution Infrastructure

Distribution Grid Upgrade Deferral Dynamic Local Voltage Control Reactive Power Compensation

Contingency Grid Support

Intentional Islanding Cross Sectoral Storage

Ancillary Services

Services to Support Behind the Meter Customer Energy Management

Frequency Containment Reserve (FCR) Frequency Stability of Weak Grids End-User Peak Shaving

Continuity of Energy Supply

Automatic Frequency Restoration Reserve (aFRR)

Black Start

Time-of-Use Energy Cost Management Limitation of Upstream
Disturbances

Manual Frequency Restoration Reserve (mFRR)

Voltage Support

Particular Requirements in Power Quality

Reactive Power Compensation

Replacement Reserve (RR)

New Ancillary Services Maximising Self-Production & Self-Consumption of Electricity

EV Integration

Load Following

Foreword by EC Vice-President Maroš Šefčovič



Maroš Šefčovič

Vice-President of the European Commission in charge of Interinstitutional Relations and Foresight Europe is facing challenging times. Russia's unjustified war against Ukraine is driving up the price of energy, food and other basic commodities, and is triggering supply chain disruptions. It is causing instability, and risks spilling over into our economies as a whole and provoking social unrest. Substantially lower energy prices in Asia and the U.S., with gas 2 times and 10 times cheaper than in Europe respectively, are putting the competitiveness of our industry at risk and deterring investment in Europe. A joint European response to this crisis will be critical to avoid fragmentation of the EU market due to the differing financial power and fiscal space of our Member States.

The European Commission stands ready to take forceful action to bring energy prices down, while looking to the Member States to take a more unified approach. In this way, we can help ensure that Europeans and European businesses are protected from the worse effects of the crises. It is also important given that the current situation and the shifting geopolitical sands constitute an opportunity to further modernise and decarbonise our economy, reinforce the EU's resilience, and achieve open strategic autonomy.

Energy storage will play a key role in this effort. It will help facilitate the integration of renewables and the electrification of the economy, while increasing the flexibility and security of the energy system. Storages will be critical to reducing energy prices by pushing expensive gas power plants out of the market during peak price hours.

Deployment of energy solutions in Europe must accelerate. Solutions in both the shorter term, like batteries, and the longer term, like 'power to x', need to be exploited to make the most of the current global storage revolution.

We have already built an adequate regulatory framework. For example, the Clean Energy Package sets out the rules for the planning, operation and ownership of storage facilities. Its timely and full implementation is therefore of the highest priority.

The trilogue meetings on the Batteries Regulation proposal have also reached crunch time. As reflected in the REPowerEU strategy, the Commission will identify key actions to continue supporting the development of electricity storage, ensuring a level playing field between different technologies and adequate economic signals.



Achieving open strategic autonomy in this critical sector will be conditional on developing disruptive technologies and creating European intellectual property. The Commission has mobilised unprecedented funding for research on energy storing technologies, whether mechanical, electrical, thermal or chemical.

For batteries, the BATT4EU Partnership, with the support of 925 million Euros from our Horizon Europe programme, will contribute to establishing an innovation ecosystem to boost a competitive, sustainable and circular battery value chain in Europe. This funding will help the further improvement not only of existing technologies, like lithium-ion based batteries, but also new kinds like sodium-ion, and organic flow batteries.

Furthermore, hydrogen can help ensure the uninterrupted supply of large quantities of clean energy needed for industrial decarbonisation. We are funding the Clean Hydrogen Partnership to the tune of 1 billion Euros, with the aim of producing clean hydrogen at a competitive price by 2030.

We must ensure that these disruptive technologies can transition into industrial application as swiftly as possible to contribute to Europe's industrial sovereignty. Therefore, we are harnessing the power of public funding and have deployed one of our most impactful tools, known as an Important Project of Common European Interest or IPCEI.

The two battery-related IPCEIs are injecting over 20 billion Euros into highly innovative projects and disruptive technologies all along the battery value chain.

And the Commission this year approved up to 10.6 billion Euros in public support under the hydrogen IPCEI.

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We must ensure that these disruptive technologies can transition into industrial application as swiftly as possible to contribute to Europe's industrial sovereignty.

Foreword by Maroš Šefčovič



In October 2022, Mr. Šefčovič delivered a keynote speech at the Energy Storage Global Conference in Brussels

Alongside adequate funding and the regulatory framework, we also need to ensure the right European ecosystems are in place to help the energy storage industry thrive.

Boosting domestic manufacturing capacities along all key value chains is an absolute priority especially if Europe is to maintain its position as a global political and economic power.

Our main competitors continue taking protective measures. China's overall share of global output keeps rising, and its imports of components for finished goods destined for the U.S. and European markets, have decreased from 23 percent of GDP in 2004 to less than 10 percent today.

A shift in approach is also evident in our allies, with the U.S. adopting the bold Inflation Reduction Act.

However, Europe has already shown it has the means to respond. The European Battery Alliance is an excellent example of how a systemic approach utilising the concerted efforts of all actors can produce results in record time.

With more than 110 major industrial battery projects being promoted across Europe, we are well on track to meet 90% of our battery needs by 2030 while creating European value. We are now replicating this success by developing value chains in other strategic sectors of our economy, such as hydrogen and semiconductors.

Let me now turn to two challenges that we need to urgently address.

First, we must strengthen the resilience of our entire critical raw materials value chain and break off Europe's overdependence on imports – which are as high as 99% for some materials.

Here we must work along three axis:

In the short-term, up to around 2027, we should focus on diversifying supply sources. To this end, we have to use our free trade agreements more forcefully and continue developing new partnerships with mineral rich countries, such as those with Canada and Ukraine

In the medium term, this will be increasingly complemented by supplies from domestic sources. Developing strategic European raw materials projects, including mines and refineries will not only strengthen our security of supply, while creating jobs, but also help us leverage global commodity prices.

In the longer term, after 2035, higher levels of critical raw materials from recycling will also play a part. In this context, we must boost our research on recycling and materials recovery technologies as well as substitutes for raw materials.

We will act fast on this work by preparing a legislative proposal on critical raw materials early next year, as announced by President von der Leyen. And we will work to build the necessary strategic reserves.

I call on all of you to participate in the ongoing public consultation on the



forthcoming Act, in order to ensure it is as impactful and effective as possible.

Second, we should address the challenge posed by the skills agenda. We need to ensure enough skilled workers for our emerging industries, avoiding any dependence on foreign markets.

Any shortage threatens to create a critical bottleneck further down the line. This is a real and measurable risk – every day of delay at a battery Gigafactory costs some 10 million dollars.

And with the battery industry alone estimating that it will need an extra 800,000 workers by 2025, this will quickly become an issue for the entire European economy.

So I would encourage you to take full advantage of initiatives such as the newly-created European Battery Academy, which is dedicated to the up-skilling and re-skilling of our labour force.

For batteries, there is also ALBATTS, the Alliance for Batteries Technology, Training and Skills, while the DRIVES project is aimed at the automotive sector.

Accelerated decarbonisation with structural changes to electricity generation, massive public and private funding, the emergence of powerful new storage technologies, and rapidly growing demand are providing fertile ground for the rapid expansion of our energy storage ecosystem.

To make it work, we need to strengthen even further the partnership between industry, research and innovation, policymakers, and other stakeholders.

I want to thank the European Association for Storage of Energy, its Secretary-General Patrick Clerens, and all of you for the excellent work. 66

We must strengthen the resilience of our entire critical raw materials value chain and break off Europe's overdependence on imports – which are as high as 99% for some materials.

Welcome by EASE President Mr David Post



David PostEASE President

Last year, we celebrated the 10th anniversary of EASE wishing for another fruitful decade, and it's clear that 2022 has abided by our wish.

Energy storage is key resilience as renewables grow

Attention around energy storage grew significantly and continues to grow, creating the need for specific policy and regulatory measures.

Europe's quest for energy independence and system security relies on energy storage deployment

The investment in renewables – that will allow Europe to use its own clean energy – will be coupled with investments in energy storage to ensure the resilience and the flexibility needed by the energy system.

Europe is expected to reach 60-100 GW of energy storage capacity by 2030, but this is not enough if we really want to move towards carbon neutrality.

EU targets for energy storage amount to approximately 200 GW by 2030,

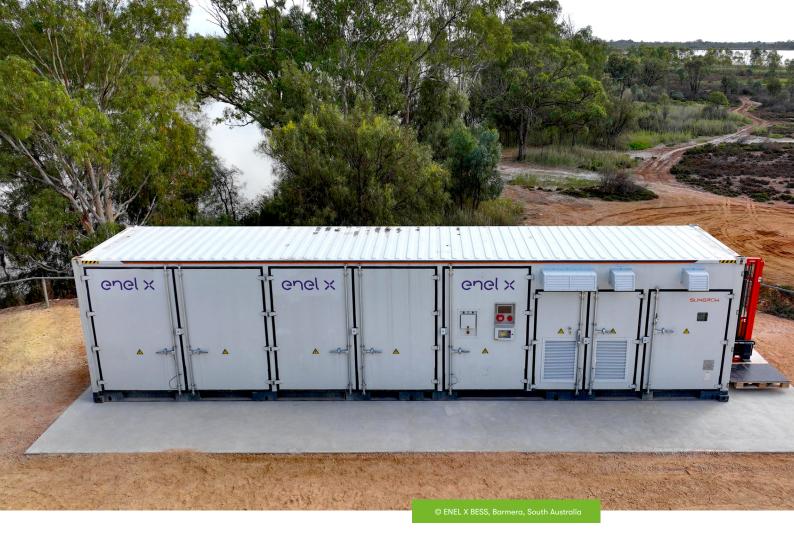
and 600 GW, hence urgent measures to boost its deployment must be taken now.

EASE continues to play a key role in providing visibility to energy storage supply chain's needs

As energy storage gains relevance, EASE role and reach are becoming more and more important, representing the interests of over 60 members, a diversified member base across the entire energy storage value chain, from developers to utilities, from DSOs to TSOs.

In fact, EASE is recognised by many stakeholders as the voice of the energy storage supply chain.

In the next pages, you will read more about our achievements, but allow me to name a few: in 2022 we strengthened our collaboration with the Long Duration Energy Storage Council, co-organising several webinars; we created for the first



time the Energy Storage Pavilion at Enlit Europe, and the European Commission Joint Research Centre continued to partner with us for the Energy Storage Global Conference.

Energy Storage continues to scale and 2023 is going to be even better.

After the success of the 2022 ESGC with a record attendance from people all over the globe, we have decided to organize the conference once again next year.

Energy storage continues to scale, and we look forward to seeing you at "ESGC 2023", in Brussels on 10-12 October 2023.



EASE is recognised by many stakeholders as the voice of the energy storage supply chain.

2022 in Circles



EASE took part in the European Commission Public Consultation for **The Adoption of an Action Plan on the Digitalisation of the Energy Sector.**



Gravitricity, Mitsubishi Power Europe and Energy Storage NL join EASE.

gravitricity





EASE and 11 other industry associations published a **Joint Industry Position Paper on the Batteries Regulation: More Consideration Needed on the Global Battery Market's Diversity.**



February

EASE, together with 10 other European and national associations, representing key energy stakeholders across the EU, Calls for More Energy Storage Provisions in Fit for 55.



EASE attends and presents at the Energy Storage Summit in London, The United Kingdom.

SQM join EASE.

SQM

EASE publishes a position paper on the Renewable Energy Directive Revision (REDIII) highlighting the great opportunity this review offers in terms of speeding up decarbonisation efforts in the energy system.



EASE issues Public Consultation on Renewable Energy Projects: Permit-Granting Processes & Power Purchase Agreements.



EASE responds to the Public Consultation on the proposal for **'Hydrogen and Decarbonised Gas markets' Package**.



EASE publishes a reply on the Revision of the Energy Performance and Buildings Directive and the Energy Efficiency Directive.



Evapco Europe join EASE.



EASE attended in the EES Europe 2022 in Munich, Germany.

May

April

March

June

EASE publishes an extensive review study for estimating the **Energy Storage Targets for 2030 and 2050**.



The EASE Task Force on Multi-Services Business Cases for Energy Storage has prepared a report "Local Flexibility at DSO Level and the Multi-service Business Case of Energy Storage".



EASE together with Delte-EE co-host a webinar to launch the **European Market**Monitor on Energy Storage (EMMES 6.0)
Interactive Database and Report.

Total Energies join EASE.



EASE together with Breakthrough Energy, SolarPower Europe and WindEurope host a physical event "Energy Security Needs Energy Storage" in Brussels, Belgium.



EASE hosts a webinar on **How Much Energy Storage Does Europe Need.**

Joined by European Innovation Council, EASE hosts a **webinar on the New**Opportunity for Energy Storage Players.

EASE prepares a general overview and the best practices across member states, when looking at **the Way Forward for Energy Storage Grid Fees.**



KOMAG and NEK Bulgaria join EASE.





EASE together with Long Duration Energy Storage (LDES) Council organises a webinar on the Long Duration Energy Storage for Europe's Future.

October

EASE issues a reply to the Public Consultation on the 2024 Ten-Year Network Development Plan Framework Guidelines.

EASE organises the **5**th **Energy Storage Global Conference**. The three-day event focuses on energy storage technologies, policy and markets.



EASE publishes the Electricity Market Design Revision.

EASE attends and presents at the Enlit

Europe 2022 in Frankfurt, Germany.



EASE organises the **final event of the MUSE GRIDS project**.

Carbon-Clean Technologies and Kyoto Group join EASE.





December

November

EASE hosts a webinar on the Electricity
Market Design Revision: Enabling
energy storage for a carbon-neutral
future.



Policy Developments in 2022

As the world was starting to recover from the COVID-19 emergency, in early 2022 another crisis struck: with the Russian invasion of Ukraine starting in late February, almost the entirety of the European Commission activities for 2022 shifted away from the foreseen Working Programme to focus on sanctions and new measures to ensure security of supply. The situation aggravated in the past months: with winter approaching, gas reserves needed to be filled to ensure heating and electricity would be available to industries and citizens for the coming seasons, and sky-high prices started impacting the continent.

REPowerEU and Energy Storage Alliance/Energy security needs Energy Storage

The main energy policy file of this year is surely REPowerEU, published in May to address the Ukrainian crisis: has highlighted in EASE briefing, it contains several proposals, starting from a general REPowerEU Communications (pointing out the essential role energy storage has in ensuring security of supply by providing energy shifting services), a solar strategy, amendments to RED, EED, Recovery and Resilience Plans, accelerated permitting procedures, and others.

Namely, EASE made sure that standalone storage facilities (in addition to co-located) will benefit of the new accelerated permitting procedures, and that all REPowerEU files appropriately mention energy storage and its role in ensuring security of supply.

On this note, a fruitful collaboration with Breakthrough Energy, SolarPower Europe, and WindEurope started earlier this year: a joint letter and a live event in Brussels, discussing renewables and storage-based security of supply, have been well received among stakeholders and policymakers, ensuring a larger

audience and strong outreach for EASE positions. The collaboration keeps bringing benefits, within the Innovation Hub and several other initiatives.

The Russian invasion of Ukraine: emergency measures for high electricity prices

More recently, the Russian invasion of Ukraine brought further instability in already volatile EU electricity markets: high prices and uncertain gas supplies have urged policymakers to issue several measures to "keep the lights on" at an affordable price.

The cap on marginal prices (not directly affecting energy storage) has been the most controversial: nonetheless, the storage industry can reap the benefits of accelerated permitting measures that have been proposed in November in a new Council Regulation calling for an emergency framework to fast-track solar and co-located facilities permitting.

EASE is in contact with relevant policymakers to include standalone storage and avoid unduly discrimination.

Fit for 55 - Development for Renewable Energy Directive, permitting, Energy Efficiency Directive, and Energy Taxation Directive

The Fit for 55 Package, issued in summer 2021 to make the energy system up to date with new decarbonisation targets (55% GHG emissions reduction by 2030) is in the pipeline for approval by the codecision bodies (Parliament and Council).

Most files have now reached trilogues, and will be most probably approved in Q1 2023: a series of briefings is available on our website. EASE has successfully engaged with policymakers at all levels to include relevant provisions for energy storage: notably, the plenary Parliament draft for REDIII includes a definition for co-located energy storage facilities, and the possibility for Member States to set up national storage capacity targets.

An effective engagement with national representations being carried out by the Policy team, in order to ensure these important changes are kept in the final REDIII draft. An exception is the Energy Taxation Directive: given the current conditions it has dropped down

among the Council priorities for the year, and it will be re-discussed in 2023. EASE is engaging with stakeholders and policymakers to make sure the abolition of double taxation becomes a reality at EU-level (following the example of The Netherlands).

Digitalisation

EASE has taken part in the European Commission Public Consultation for the adoption of an Action Plan on the Digitalisation of the Energy Sector. EASE supports this initiative for the digitalisation of the energy sector which has the potential to play a key role in the energy transition towards a decarbonised European Union.

Hydrogen and Decarbonised Gas Market Package

After engaging with the European Commission to ensure energy storage is always able to feed into an electrolyser to produce green hydrogen, EASE has followed closely topics related to additionality in hydrogen production and the creation of a decarbonised gas market; the additionality Regulations are now sent back to the Commission after the Parliament struck down the additionality principle during a RED vote, and will be re-issued next year.

Battery Regulation

Due to several delays at different legislative levels, the Battery Regulation has yet to be approved: the initial deadlines are now unrealistic, mainly because the three legislative bodies disagree on the scope of the Regulation itself.

The draft approved in the European Parliament plenary is not reflecting the diversity of the battery ecosystem, and could add regulatory complexity in an already extremely regulated segment, such as battery safety, recycling and reuse.



Several implementing acts are then to be expected by the European Commission to define technical details of the different requirements laid out in the Regulation – EASE will keep following the developments.

Innovation Hub and LDES Collaboration

EASE started fruitful collaborations during the past year: on one hand, the Climate Innovation Hub is a platform that aims at supporting the policies, instruments and investments that deliver the innovations that the EU needs to be climate neutral by 2050.

Its members include Cleantech for Europe, E3G, the University of Cambridge, T&E, Agora Energiewende, and others. Its purposes is for Hub members to coordinate and act in concert to deliver greatest direct impact on agreed Hub objectives.

This requires information sharing, exchange of views and insights, joint actions, media outreach and aligned advocacy. Another collaboration

that kept growing through the year is with the Long Duration Energy Storage (LDES) Council – different internal activities (Working Groups and general coordination) as well as public events (as the joint webinar on policy recommendations for Energy Storage that was held in September).

TYNDP

In 2022 ENTSO-E started the process for the next 10-year network development plan (TYNDP) cycle for 2024. EASE has worked with ACER, who is drafting the framework guidelines for the scenarios to be drawn up. EASE has responded to its consultation aiming to ensure that gas and electricity scenarios are harmonised, and that the energy storage sector is consulted throughout the process.

More files have been followed by the EASE Policy Team this year: approval of the new State Aid Guidelines, the Alternative Fuels Infrastructure Regulation, ETS and CBAM: follow our bi-weekly policy update to get all key developments in EU energy and climate policy we are working on.

EASE Activities in Policy

It has been an intense year for the energy sector – EASE Secretariat and EASE Task Forces have worked hard to investigate the key economic, technical, and policy questions of 2022.

A key topic for EASE and its member is business cases: in 2022 the EASE Task Force Behind-the-Meter has looked into revenue streams and the Italian use case for solar PV coupled with a battery energy storage system. The Behind-the-Meter market segment is expected to grow dramatically in the next few years.

Of course, important challenges for the energy storage sector are financing and bankability. That's why EASE Secretariat is closely working with the European Commission to improve that. EASE co-operated with the European Commission's European Innovation Council - its flagship innovation programme - to identify, develop and scale up breakthrough technologies.

Moreover, a joint workshop on energy storage within the Innovation Fund was jointly organised with the European Commission.

The EASE Task Force Network Codes also had a busy 2022 – especially in the last months of the year. EASE's effort to develop sound network codes on e.g. demand connection or requirements

for grid connection of generators will facilitate the harmonisation, integration, and efficiency of the European electricity market.

In cooperation with the Working Group on Taxies, Grid Fees, and Levies, EASE Secretariat has prepared a general overview and the best practices across member states, when looking at the way forward for energy storage grid fees. Energy storage doesn't receive the same treatment across the European Union as far as grid fees go: different technologies and solutions face a variety of tariff structures.

EASE Task Force Safety efforts' have focused on supporting the Energy Storage Partnership, convened by the World Bank Group to foster international cooperation to adapt and develop energy storage solutions; and CEN-CENELEC work on standardisation challenges.

EASE Task Force Sustainable Batteries has continued following the legislative process and negotiations behind the Batteries Regulation.



It is a game-changing dossier for the industry, so it is paramount that its provisions are suited to battery energy storage systems. Cooperating with the European Commission's Joint Research Centre, this Task Force also aims at ensuring that carbon footprint calculations are science-based and sound.

The EASE Secretariat and the EASE Task Forces on Power-to-Gas and biofuels has analysed and responded to the "European Commission's proposal for 'Hydrogen and Decarbonised Gas markets' Package. In the context of the Russian invasion of Ukraine, this file is key to improving the gas market, decarbonise gas consumption, support the creation of optimum and dedicated infrastructure.

EASE has worked also with the ENESA – the European National Energy Storage Associations members to identify national best practices regarding permitting and PPAs. Unreasonable permitting barriers currently plague energy storage

developers: luckily, it seems EASE work has been successful, with very good legislation proposals being published by the European Commission in Autumn of 2022.

Finally, EASE has worked with LCP-Delta on the European Market Monitor on Energy Storage (EMMES). The EMMES is based on the most extensive database of European energy storage projects.

The database of over 2,600 projects includes detailed data on current installations by customer segment (residential, C&I, and front-of-meter) across 24 European countries, future projects and forecasts to 2030.

This unparalleled market intelligence is free for all EASE members.

Developments in Funding for Energy Storage and EASE Involvement in EU-funded Projects

After the launch of the new funding programmes, 2022 was a year of positive results for energy storage players in different funding schemes and of positive outcomes when it comes to new work programme.

Supporting innovative players and diversify the solutions to be provided

After a 2021 full of promises, EASE continued to support policy makers in the shaping R&I programs through direct involvement in policy forum and strategic platform such as BEPA, the ETIP SNET, Battery 2030+.

By helping the definition of roadmaps, R&I topics, EASE helped to pursue a technology neutral approach when it comes to supporting innovative players across Europe. By contributing to the definition of R&I roadmaps and topics, EASE has helped to pursue a technology-neutral approach when it comes to supporting innovative players in Europe.

This approach allows both to diversify the solutions to be provided according to the needs of the different sectors but also to build an innovative, competitive European energy storage industry able to meet the necessary requirements to decarbonise the European economy.

All technologies have a role to play

These results were visible in the Horizon Europe Work Programme 2023-2024 released in December 2022 were the European Commission considered all technologies and different applications where energy storage as a role to play.

From batteries to hydrogen without forgetting other technologies such as thermal storage, pumped hydro and others, the European Commission recognised that energy storage plays and will play a role in the years to come to support the decarbonisation of the European economy.

Supporting breakthrough energy storage technologies

We observed a continuous support and a reinforcement of the support in other EU funding schemes.



As the European Innovation Council dedicated a fair amount of funding to breakthrough energy storage technologies, we are very pleased to see that the EIC will dedicated more than 1.5 billion euros in 2023 to support innovators in Europe.

From researchers to start-up, the EIC will be able to help the energy storage community via different mechanism adapted to the reality of these different players.

We are also pleased to see some changes in the Innovation Fund.

If the 2021 large scale call results represented a disappointment for the energy storage sector, the openness of the European Commission to discuss some issues proved to be the best strategy to improve the Innovation Fund.

EASE organised several workshops with others associations to explain needed improvements to ensure a level playing field between energy storage projects and projects from other categories.

Effort to support companies and innovators bringing technologies to commercial stage

And the 2022 results confirmed the improvements with 4 projects related to energy storage out of the 17 projects selected. These improvements will most likely continue with the new large scale and small-scale call in 2023.

In 2023, the 3 billion euros that the European Commission will dedicate to the large-scale call represent a massive effort to support companies and innovators willing to bring their technologies to commercial stage.

1 billion euros will be dedicated to innovative projects in renewable energy, energy-intensive industries, energy storage or carbon capture, use, and storage, as well as products substituting carbon-intensive ones (notably low-carbon transport fuels, including for maritime and aviation);

1 billion will be dedicated to innovative electrification in industry and

hydrogen seeking innovative projects in electrification methods to replace fossil fuel use in industry as well as renewable hydrogen production or hydrogen uptake in industry.

Moreover, 0,7 billion euros will be dedicated to clean tech manufacturing of components as well as final equipment for electrolysers and fuel cells, renewable energy, energy storage and heat pumps.

Last but not least, 0,3 billion euros will be dedicated to mid-sized pilots seeking highly innovative projects in disruptive or breakthrough technologies in deep decarbonisation in all eligible sectors of the Fund.

In this context, EASE hopes that these improvements observed in 2022 will continue in 2023 with stronger support for Energy storage innovators in Europe.

EASE will continue to work closely with the European Commission and in fora built to support the European Commission in the definition of R&I priorities for the years to come.

Energy Storage Global Conference 2022

The fifth edition of the Energy Storage Global Conference (ESGC) gathered key representatives, in Brussels at Hotel Le Plaza, on 11-13 October 2022, to exchange views on the main issues faced by the energy storage sector and to debate the future of energy storage.

Organised by EASE, in collaboration with the European Commission's Joint Research Centre (JRC), ESGC 2022 assembled over 365 onsite and online participants, including manufacturers, suppliers, EU and national policymakers, utilities, consultancies, project developers, investors, the research community, regulatory authorities, as well as DSOs and TSOs.

Participants were provided insight from over 85 speakers, through keynote speeches, presentations, and in-depth panel discussions, on how the energy storage sector is evolving and how it must evolve.

Through three main topics, ESGC 2022 also explored the extent at which energy storage can help avoid dependency on fossil fuels and help balance the electricity system.

The conference addressed the regulatory and policy frameworks, the future of the storage market, and the latest developments in energy storage technologies.

ESGC 2022 gained support from 8 sponsors: EDF, Enel X, Enspired Trading, Fluence, Intilion, LDES Council, Saft and Wärtsilä.

12 exhibitors, onsite and virtual, showcased their activities and products, and highlighted their commitment to the energy storage sector

The first day of the conference was launched by a keynote speech from Maroš Šefčovič, Vice-President of the European Commission, in charge of Interinstitutional Relations and Foresight.

Commissioner Šefčovič highlighted that the "deployment of energy storage solutions in Europe must accelerate" and acknowledged that energy storage "will help facilitate the integration of renewables and the electrification of the economy, while increasing the flexibility and security of the energy system."

Policy day focused on topics such as the political support required for energy storage uptake, energy market design, energy storage policy implementation and the decarbonisation of the energy system.

Catharina Sikow-Magny, Director at the European Commission, stated that "the so-called energy-only market has had its time" and called for a review of the capacity remuneration mechanism.

The second day, dedicated to energy storage markets, examined the economic viability of energy storage technologies and the various types of funding available.

Delegates also addressed the challenges and opportunities for investments in markets around the world, highlighting the United States, Australia, China and India, and assessed the role of TSOs and DSOs in ensuring a functioning market for energy storage.

Finally, the third day, dedicated to technologies, provided insight on the JRC's vision for energy storage, and addressed topics such as optimising infrastructure, combined energy storage technologies, long duration energy storage, raw materials, modelling frameworks, minimising the environmental footprint, interoperability and digitalisation.

The ESGC is a major event for industry representatives, innovators, researchers and policymakers to further the deployment of energy storage.

Over the years, the ESGC has become instrumental in connecting key actors of the energy storage sector and provides a platform for pioneers and market leaders to showcase their products and services, and present innovative ideas and best practices.



DAY 1 - POLICY

Gain in-depth information about the Electricity Market Design, the US Inflation Reduction Act and EU subsidies for energy storage, critical raw materials and more.

DAY 2 - MARKET

Discuss best practices and trends from around the world and identify more opportunities in opening markets for investments in energy storage.

DAY 3 - TECHNOLOGY

Learn more about recycling and repurposing in the energy storage sector, explore the fields of energy data sharing and thermal energy storage, and discover the latest innovations with leading experts from around the world.



ENERGY STORAGE

Global Conference

BRUSSELS, 10 — 12 OCTOBER 2023

Get ready and save the date! The EASE Secretariat is excited to announce plans for the next Energy Storage Global Conference 10-12 October 2023.

With the recognition energy storage has gained in recent years and after the success of the first five Energy Storage Global Conference editions, the ESGC is developing into an annual Conference!

The sixth edition of the ESGC will be held on 10-12 October 2023, in Brussels.

Topics will cover the core themes in Policy, Markets and Technology.

Sponsors and exhibitors

Showcase your products and spread your message among the most relevant energy storage stakeholders and gain visibility through the ESGC 2023! Contact us for more information to reserve the package that best suits your objectives.

For more information, visit www.esgc.org



For more information visit

What to Expect in 2023

EASE foresees 2023 as being an important year for energy storage. The on-going energy crisis, following the Russian invasion of Ukraine, has demonstrated the need for Europe to double down on its efforts to decarbonise, with energy storage playing a role to support energy security. The continued initiatives of Fit for 55, a new upcoming electricity market reform, and other new legislative proposals, are opportunities for energy storage to secure its place as the fourth pillar of the energy system.

New initiatives in 2023

In the first quarter of 2023, the European Commission will publish its proposal for a revised Electricity Market Design, according to the Commission work programme.

EASE will call for long-term revenue streams for energy storage, reducing renewable electricity curtailment, unlocking low-carbon system services, a decarbonised capacity mechanism and forward-looking system planning.

This is a once in a decade opportunity to ensure energy storage becomes a critical part of the energy system and to design an electricity market that does justice to consumers and reaps the benefits of low-cost green solutions.

Running alongside this advocacy work, EASE will continue its Energy Security needs Energy Storage alongside Breakthrough Energy, SolarPower Europe, and Wind Europe, highlighting importance of energy storage for Europe to achieve energy security.

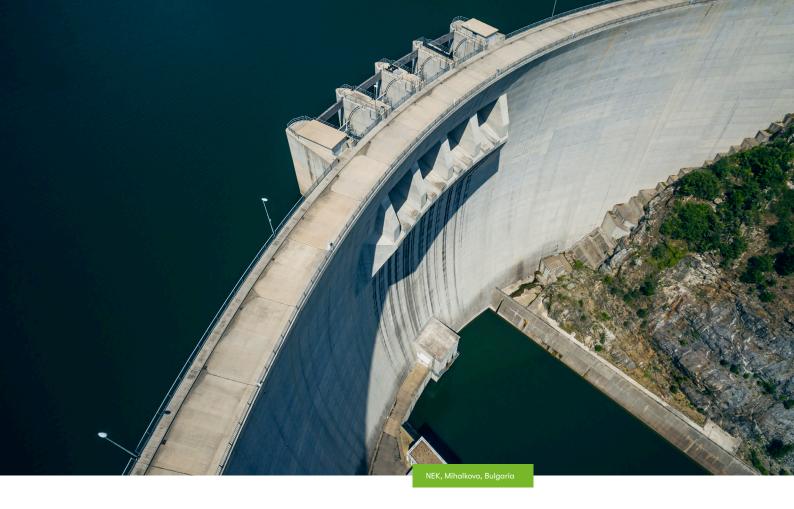
Addittionally, to be proposed in the first quarter is the Critical Raw Materials Act, announced in the State of the European Union address. The act aims to build resilient supply chains for sourcing and recycling raw materials, which will be essential for energy storage roll out.

Later in the year, in the third quarter, the Commission is scheduled to proposed a new EU Hydrogen Bank to invest €3 billion in helping to building a future hydrogen market.

EASE's Energy Storage Targets 2030 and 2050 report will be used throughout next year to ensure these new initiatives are aligned with the energy storage deployment Europe needs

Continued work

Legislative initiatives from Fit for 55 still need to reach agreement between the EU Parliament and Member States. The revised Renewable Energy Directive and Energy Efficiency Directive, which aim to raise European



energy ambitions, are foreseen to reach an agreement in trilogues early next year, where EASE will aim to ensure pro-storage provisions remain in the final text.

Further provision from REPowerEU will join these two texts in trilogues.

The Energy Performance in Buildings Directive, which focuses on energy use within buildings, and electric vehicle integration, will be voted upon within the EU Parliament in Q1 of 2023, and later enter trilogue discussions, where EASE will defend the use of energy storage to provide system flexibility and better integrated micro-isolated systems.

The Energy Taxation Directive is severely delayed, with approval foreseen at the end of 2023 under the Spanish presidency.

Member States have had a record number of extraordinary energy council meetings this year, using emergency measures on creating a Joint Purchasing Platform for natural gas, capping energy prices, addressing liquidity issues for energy firms and accelerating permitting for renewables and storage.

The effects of these measures will be seen over the next year, where EASE will keep members informed.

2023 - Looking forward

The upcoming year is already looking to be an important one with exciting work to be done for the energy storage industry.

In 2023 we foresee more in-person collaborations with members through the general assembly, committees, as well as looking forward to welcoming everyone to the Energy Storage Global Conference 2023, building upon this year's success.

As energy storage establishes its critical place in the energy transition, EASE is eager to continue its contribution to building an even brighter future for the Energy Storage sector.

Closing by EASE Secretary General



Patrick Clerens

EASE Secretary General

Last year we celebrated EASE 10th Anniversary. In 2022, EASE is one year older and wiser, making its voice heard and being a leader in the discussion about energy storage solutions within Europe.

This year marked a really important step forward green energy transition and a more impactful role for energy storage in Europe.

In the context of the Russian invasion of Ukraine, energy storage solutions are being seen as having valuable potential, and Europe is becoming aware of energy storage being a solution to counteract increased energy and gas prices, to guarantee Europe's energy security and to effectively meet its climate and energy targets. Now more than ever, energy storage needs to be on the table for discussion.

Active & fruitful interaction

Throughout 2022, EASE reached out to members and stakeholders both online and offline. The Energy Storage Global Conference (ESGC) 2022 was successfully held in Brussels in a hybrid format.

This year's ESGC welcomed more than 365 participants, attending both online and in-person, from 35 different countries, achieving a rewarding result. The number of participants proves that the hybrid ESGC format encouraged flexible but in-depth discussions, allowing people from all over the world to join an insightful and

valuable exchange on Energy Storage under three different aspects: policy, market and technologies. On the other hand, feedback collected during and after the conference shows that a majority of online and physical attendees found the conference "excellent".

In the meantime, EASE continues engaging with policymakers via different channels, publishing position papers and policy analyses and sending letters to institutions. EASE members vigorously engaged in different EU funding projects in 2022.

Thanks to the active support and exchanging of and with all the members, EASE has been able to make a difference in the energy storage framework in Europe and make itself heard where decisions were being taken. Four new members joined the EASE membership; 61 members now represent various stakeholders throughout the energy storage supply chain.

Policy focus going forward

In response to the energy crisis prompted by the Russian war of aggression in Ukraine, the Commission revealed the REPowerEU



package, which seeks to accelerate the energy transition to homegrown renewable energy to reduce European dependence on Russian fossil-fuels.

EASE has welcomed the Commission's recognition of the important role energy storage, both co-located and standalone, can play in securing Europe's energy and the various opportunities presented in REPowerEU for energy storage to boost its role in the European energy market.

We have analysed the related policies in-depth, inter alia, permitting accelerations for renewables energy systems and co-located storage, proposed measures to reduce natural gas prices, the increased funding for the Innovation Fund, the raising of renewable energy and energy efficiency targets and the developing revision of the Electricity Market Design.

There is still a lot more to be done and discussed, however, many of us are encouraged to see how the flow of policies is recognising the potential of energy shifting and flexibility.

As REPowerEU has progressed this year, EASE has identified the Revision of the European Electricity Market Design as one of the most important opportunities for energy storage in over a decade.

In 2023, Market Design will be the primary focus of EASE advocacy to ensure that energy storage is properly included in the future design of the European electricity market. In order to meet this once-in-a-decade opportunity, EASE has proactively finalised our position paper on the Market Design -well in advance of other stakeholders- and has mapped out strategic partners to engage with as the proposal makes its way through the EU.

Energy storage can no longer be an afterthought in the European electricity market and needs to regarded as one of the critical solutions in securing low-cost, clean energy for all Europeans.

EASE also looks forward to the release of the Commission's Staff Working Document on Energy Storage, which will boost the presence of

energy storage on the minds of EU policymakers in current and future policy proposals to advance the green energy transition.

One step further in 2023

Looking back on 2022, we should not forget we have been going through an extraordinarily challenging time.

Over the past years, unprecedented circumstances continue to hit the energy storage sector, but have also opened up more opportunities than ever to bring the benefits of energy storage to more and more of Europe and the world.

The successes of this year were only possible because of the hard work of the actively participating members, the Secretariat, and EASE's president, Mr David Post. EASE began as a resilient, ever-growing community in 2011 and 2022 was no different.

I am confident in the energy storage community's ability to meet the challenges of today in order to make for another prosperous year in 2023.

EASE Structure and Organisation

2021 - 2023

General Assembly

Executive Board

President
David Post (Enel X)

Vice-Presidents
Corneliu Barbu (Aarhus University)
Michael Lippert (Saft)
Holger Wolfschmidt (Siemens Energy)

Treasurer Etienne Briere (EDF)

> Secretary General Patrick Clerens

As a non-profit association, EASE is governed by an Executive Board elected by the members of the General Assembly and has several bodies dedicated to the various aspects of energy storage and the associated challenges and opportunities.

The **EASE presidency** is currently held by Mr David Post, Head of Energy Storage Solutions at Enel X and former EASE Vice-President. This was his first year in office and we're looking forward to the years to come. He is supported in his function by three Vice-Presidents: Mr Michael Lippert (Saft), Mr Corneliu Barbu (Aarhus University) and Mr Holger Wolfschmidt (Siemens Energy). Additionally, Mr Etienne Briere (EDF) will cover the position of Treasurer.

The of the EASE presidency is supported by three Committees:

The Technology and Value Assessment Committee (TVAC), chaired by Mr Karim Sidi-Ali-Chérif (CEA), aims to deliver the necessary data for supporting all EASE positions and interactions with external stakeholders.

The **Strategy Committee** (STC), chaired by Mr Miguel Garagorri (Iberdrola), advises and supports the Executive Board on policy-strategic issues affecting the storage industry, defines and promotes a fair market design for all the services provided by energy storage. It also contributes

to the issue management process, including the representation on identified topics, as well as, to the advocacy processes in the specific field of responsibility.

The **Communications Committee (COMC)**, chaired by Mr Luca Camuncoli (EDF), defines and implements the communication strategy of EASE in terms of target audience, content, and media.

The **General Assembly** and the **Executive Board** are responsible for all association-wide decisions, whereas the Committees and the underlying Coordination Group, Working Groups and Task Forces are involved in topic-specific decisions and tasks.

EASE Secretariat



Patrick Clerens
EASE Secretary General

Policy Team



Jacopo Tosoni Head of Policy



Martin Roach Senior Energy Analyst



Thomas LewisPolicy Officer



Lidia Tamellini Junior Policy Officer



Margareta Roncevic Junior Policy Officer

Communication Team



Valentina Ferrara Communications and Events Officer



Elina Cirule
Communications
Officer



Pailine Caroni Events Officer -Energy Storage Global Conference

Project Management Team



Thomas Otuszewski Project Officer

Become a Member

EASE was established in 2011 and currently represents over 60 members including utilities, technology suppliers, research institutes, distribution system operators, and transmission system operators. Together, EASE members have significant expertise across all major storage technologies and applications.

Members' benefits



Market intelligence

Members receive timely information and data about future market developments that can help them adapt to the changing business environment.

 Visibility and networking

Featuring in EASE's publications and events, such as the Energy Storage Global Conference, gives members the opportunity to gain visibility and to strengthen their network among storage experts.

Get connected Become a member



Advocacy

EASE is actively shaping the legal and R&D funding framework for energy storage at EU level. Members gain direct influence in the EU decision-making process.

 R&D and EU-funded projects

Members benefit from EASE's expertise and technical know-how, and they can participate in EU-funded research projects.

Membership Categories

Regular

Organisations involved in energy storage activities in Eaurope such as utilities, grid operators (TSOs and DSOs), equipment and technology manufacturers, and R&D organisations.

Consultancies

Consultancies involved in energy storage activities.

Start-ups

Start-ups developing energy storage technologies are allowed to join EASE at a discounted rate compared to regular members.

Associations

Associations involved in energy storage, directly or indirectly, at EU national or European level. Only secretariat personnel can be directly involved in EASE.

Associate

Any organisation that does not fulfil the requirements to become a Regular Member with activities relevant to energy storage.

Members Benefits





^{*} Elective position

^{**} No voting rights

• • • • EASE Members























































































































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