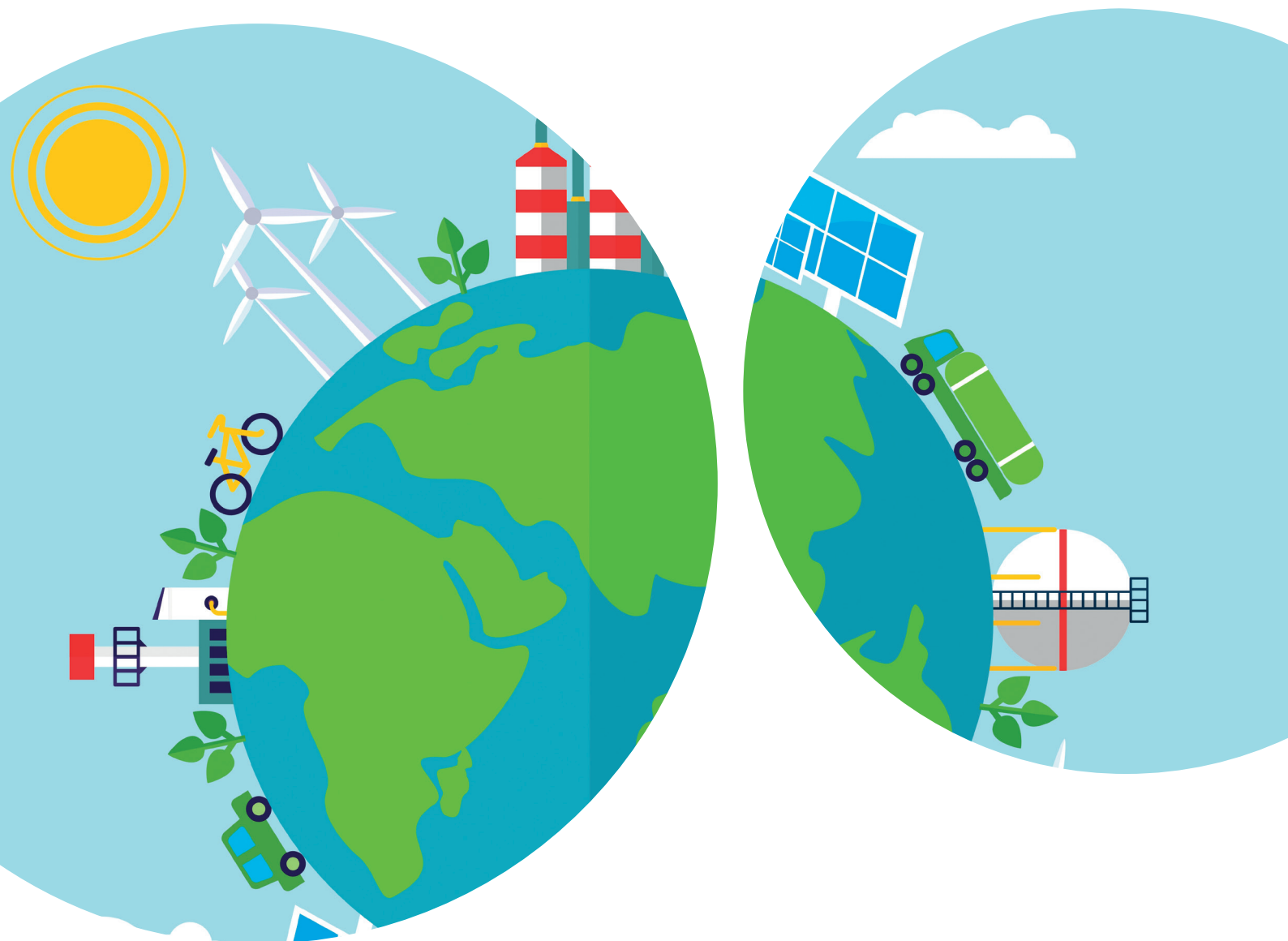


ACTIVITY REPORT 2016



Special acknowledgment to the EASE members who helped make this publication possible.
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Table of Contents

Energy Storage Quotes	6
2016 in a Nutshell	7
Welcome by the President	8
2016 in Circles	10
Energy Storage Global Conference 2016	12
Clean Energy for All Europeans Package	14
EASE-EERA Energy Storage Technology Development Roadmap	16
European Funding for Energy Storage R&D	17
Grid+Storage Project	18
Intensys4EU Project and Support to the ETIP SNET	19
EASE Technology Families	20
Energy Storage Applications	21
EASE Structure	22
EASE Secretariat	23
EASE Partners	24
EASE Value to Members	25
What to Expect in 2017?	26
Closing by Secretary General	28
Members	30



The European Association for Storage of Energy...



...is the voice of the Energy Storage community, actively promoting energy storage in Europe and worldwide.



...supports the deployment of energy storage as an indispensable instrument within the framework of the European energy and climate policy to deliver services to and improve the flexibility of the European energy system.



...seeks to build a European platform for sharing and disseminating energy storage-related information.



...supports the transition toward a sustainable, flexible and reliable energy system in Europe.



GE Afourer Hydro Mechanical Morocco

Energy Storage Quotes

“Grid expansion & demand side management are not enough for the integration of renewable energy sources. Energy storage is key”.

[Dr K. Peter Röttgen, EASE President.](#)

“There is no transformation of the energy industry without energy storage”.

[Dr Michael Sterner, OTH Regensburg.](#)

“Energy storage allows for energy efficient use of existing assets, including conventional and renewable power generation, and can provide energy efficiency benefits at both the grid and at consumer level”.

[Andreea Strachinescu, European Commission.](#)

“Energy storage is at the “beginning of an explosion” that will see the technology become the “glue to optimise the infrastructure that’s already in place and make it work together”.

[Carla Tully, AES UK & Ireland.](#)

2016 in a Nutshell

- Welcoming the “[Clean Energy for All Europeans](#)” package, published by the European Commission in end-November, with three main goals: putting energy efficiency first, achieving global leadership in renewable energies, and providing a fair deal for consumers. The recast of the Electricity Directive, a key element of the package, establishes for the first time a proposition for a **legal definition for energy storage**. The package also includes a Communication on Accelerating Clean Energy Innovation, which lays out a framework for action to increase public and private investments in low-carbon technologies and pushes for the development of clean energy business models. The Communication recognises the **importance of energy storage by designating it as a priority area** for clean energy research and innovation, alongside electro-mobility, decarbonisation of the building stock, and the integration of renewables.
 - [A position on ownership of energy storage](#) by regulated entities was agreed on by the EASE members.
 - [Energy Storage Global Conference 2016](#): on 27-29 September 2016, EASE organised the **second Energy Storage Global Conference** in Brussels. More than **220 delegates** attended the Conference, which also welcomed **49 speakers** from the industry, research centres and international bodies from the electricity, renewables and storage sectors, as well as representatives from the European Commission, the European Parliament, and national administrations.
 - Successful completion of the [Grid+Storage project](#): EASE was part of a consortium supporting the European Commission in defining an integrated R&D strategy in smart grids and energy storage. The roadmap was approved by the ETIP SNET on 9 December 2016.
 - [European Technology and Innovation Platform for Smart Networks for the Energy Transition \(ETIP SNET\)](#): EASE was nominated Vice-Chair of the ETIP SNET Governing Board and will play an active role in the Working Group on energy storage. EASE is also a member of the INTESYS4EU consortium, which will manage the ETIP SNET activities.
 - The EASE members and team had the chance to visit [Terna's Storage Lab](#) in Sardinia; a **unique project** that is designed to analyse the **performance of selected battery technologies** when used to provide essential grid services such as frequency regulation, secondary regulation, and voltage regulation. In addition to testing various services, the Lab is tasked with putting selected battery technologies through their paces in order to prove their performance when working in real case scenarios.
 - EASE's recommendations for the assessment of storage projects were taken up by ENTSO-E in its CBA 2.0, the methodology used to assess projects for the Ten-Year Network Development Plan (TYNDP) and Projects of Common Interest (PCI). EASE and ENTSO-E have collaborated on the CBA since 2013 and continue to have constructive discussions to ensure that energy storage projects are fairly assessed.
 - EASE held its first ever [Student Award](#) contest, recognizing the excellence that academia can bring to energy storage.
-
- For further information on EASE activities and updates, please visit: www.ease-storage.eu.



Welcome by the President

In recent years, we have seen an increasing awareness that energy storage is essential to establish a secure, low-carbon, and flexible energy system in line with Europe's clean energy ambitions.

2016 was no different: we saw all sorts of policies and initiatives that recognised the value of energy storage. Although a

diverse range of energy storage technologies is being deployed across Europe today, the regulatory framework still has not fully caught up with this rapid transformation.

This year revolved around the preparation for the "Clean Energy for All Europeans" Package, for which EASE had high hopes: it should include a first-ever EU definition of energy storage, recognise the value of storage, and address the market barriers that EASE has identified. EASE was happy to see that the proposed package addressed most of these elements, showing a real commitment by policymakers to consider the challenges faced by energy storage and other new entrants to the energy system.

The work is not done yet, however. Several improvements still need to be made to the package to ensure that storage can compete on a level playing field and provide its full value to consumers and the energy system as a whole. Further efforts need to be made to clarify the ownership of energy storage by regulated entities, to ensure that all system services are procured in the market, to enable energy storage operators to 'stack' multiple services on one device, and to ensure that grid charges and fees are non-discriminatory.

EASE will be working closely with EU policymakers and all other relevant parties throughout the coming years to ensure that the Clean Energy Package provisions are supportive of energy storage.

Of course, there were also many other highlights in 2016. Kicking off a new EASE tradition, we announced our first ever EASE Student Award to recognise outstanding graduate student research in the field of energy storage. In September 2016, EASE organised the second Energy Storage Global Conference in Brussels. Over 200 experts from all over the world came together to discuss the latest trends in a wide range of energy storage technologies, compared business cases, and assessed regulatory issues across segments and countries. It was an exciting experience that we look forward to building on at our next conference in 2018.

Additionally, the European Technology & Innovation Platforms Smart Networks for Energy Transition (ETIP SNET) started its activities end of 2016. The Grid+Storage project, in which EASE was also involved, published its Roadmap, which will serve as a basis for all future ETIP SNET deliverables. In 2016, EASE also began working with the European Energy Research Alliance (EERA) to draft an update of the EASE-EERA Energy Storage Technology Development Roadmap. These are just a few of the ways EASE is helping guide research, development and innovation in the energy storage sector to support Europe's energy transition.



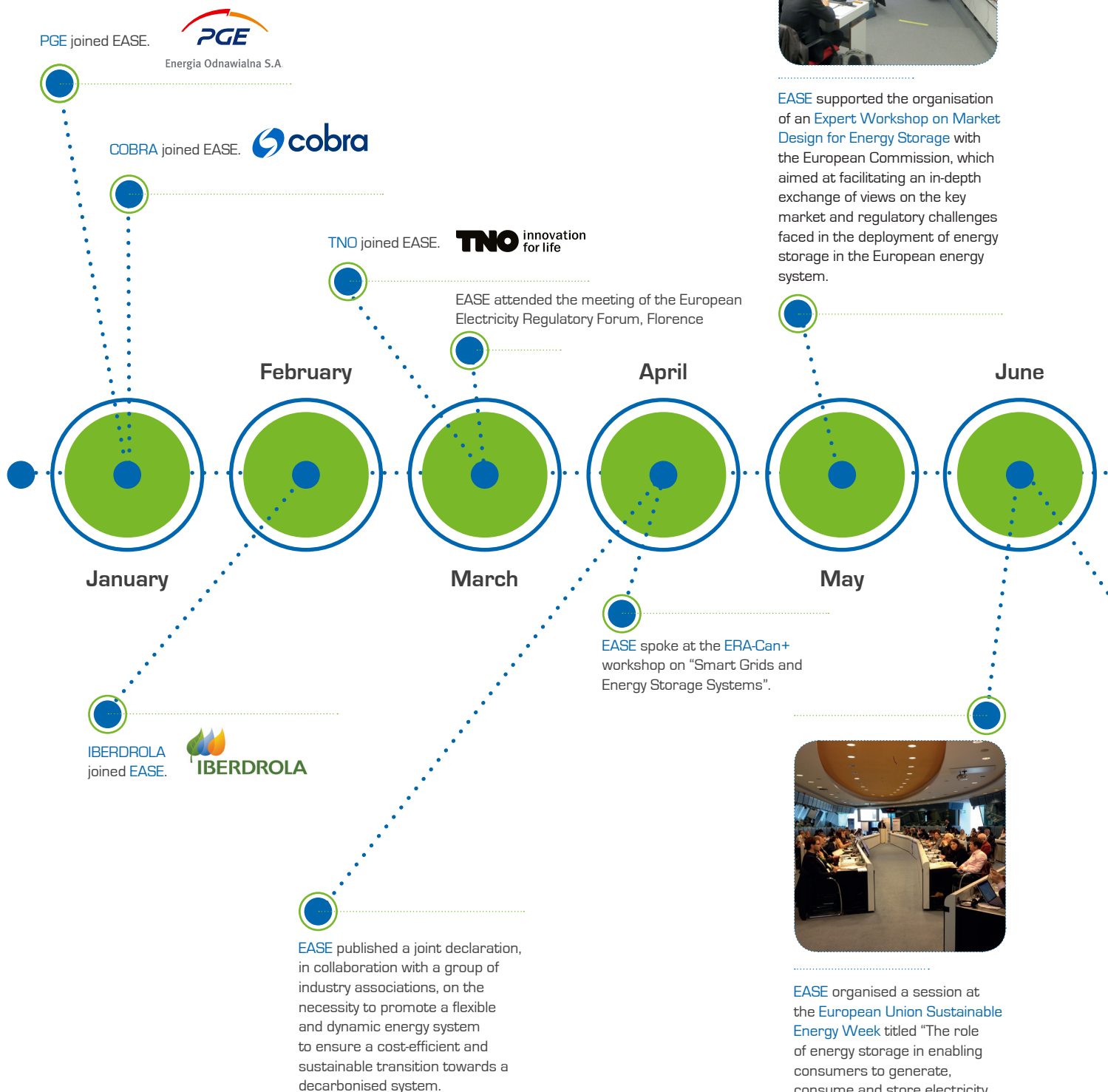
Of course, throughout 2016 we also welcomed new members into the fold. Just as energy storage has evolved from a niche topic to a vitally important aspect of the energy transition, EASE has grown rapidly since it began in 2011. EASE is proud to be cementing its position as the primary advocate for energy storage in Brussels, as well as the go-to reference point for energy storage-related information.

In conclusion, it has been another busy year for EASE. We have many achievements to be proud of, achievements which would not be possible without the hard work of our members and Secretariat team. I would like to warmly thank the EASE members and the Secretariat for all their efforts to prepare the grounds for energy storage on a European level, not just during the past year, but ever since the foundation of EASE. We look forward to continuing our work with the European institutions to ensure the full participation of energy storage in the market.

Let's hope that 2017 is just as stimulating and successful as 2016. Whatever happens, exciting times are in store for the energy market!

Dr K. Peter Röttgen
President

2016 in Circles



EASE supported the organisation of an [Expert Workshop on Market Design for Energy Storage](#) with the European Commission, which aimed at facilitating an in-depth exchange of views on the key market and regulatory challenges faced in the deployment of energy storage in the European energy system.



EASE organised a session at the [European Union Sustainable Energy Week](#) titled "The role of energy storage in enabling consumers to generate, consume and store electricity from renewables" together with the European Heating Industry Association, Eurelectric, Eurobat and SolarPower Europe.



EASE members and team visited Terna's Storage Lab in Sardinia, a project designed to analyse the performance of selected battery technologies when used to provide essential grid services such as frequency regulation, secondary regulation, and voltage regulation.



EASE organised the second Energy Storage Global Conference 2016.

EASE published five recommendations concerning the ownership of energy storage by regulated entities as part of its call for the European Union to provide a clear legislative framework on ownership for the ES industry to support investment in the sector.

EASE attended SET Plan – Central European Energy Conference X in Bratislava, Slovakia.



ETIP SNET
PLAN. INNOVATE. ENGAGE.

European Technology and Innovation Platform "Smart Networks for the Energy Transition" (ETIP SNET) was established.

August

October

December

July

September

November

EASE announced the winner of the first edition of the EASE Student Award contest: Eduard Ignatev

LG Chem joined EASE.  LG Chem

ETIP SNET approved the Roadmap for the Grid + Storage project, which aims to support the European Commission in defining an integrated R&D strategy. EASE was a Grid + Storage consortium member.

ETIP SNET launched its activities.



EASE chaired the Energy Storage Technology, Energy Storage Applications, Energy Storage Modelling session of the POWER-GEN Europe conference.



Energy Storage Global Conference 2016

Following upon the success of the first Energy Storage Global Conference (19-21 November 2014, Paris), the growing interest in the topic and its increasingly acknowledged relevance, EASE organised a second ESGC in Brussels on 27-29 September 2016.

Main conclusions of the conference:

- The speakers unanimously agreed that [energy storage will play a vital role in the future energy system](#) which is undergoing important changes right now. Energy storage technologies are rapidly developing and are already commercially viable for a number of applications. It is now time for policymakers to catch up with these developments and create an enabling regulatory environment.
- [Defining energy storage](#) in the upcoming Energy Market Design legislation is therefore a [top priority](#) to clarify its role in the energy system and to increase investor confidence.
- The Energy Market Design regulation also needs to [address a number of barriers hampering the deployment of energy storage in Europe](#), such as undue tariffs and double-taxing of energy storage devices, unclear rules around the ownership of energy storage, and non-market based provision of ancillary services.
- European policies for [RD&D](#) in energy storage are using the right tools, but [more funding is needed to reach the full potential of each energy storage technology](#), support continued upscaling and cost reductions, and encourage the emergence of new technologies in which European industries could become globally competitive.
- [Continued cooperation of all different stakeholders](#) including industry, utilities and regulators is vitally important to implement storage successfully as a value-adding element in the future energy system.

ESGC in numbers:

- 220+ attendees.
- 49 speakers from the European Commission, the National Administrations, Industry, Research Centres and other National & International bodies.
- 2 sponsors: EDF and ENGIE.
- 10 exhibitors: ESTMAP project, GlenDimplex, ICL, KIC InnoEnergy, MHPSE, PVH Storage, S&C, Saft, Siemens, EASE.
- 2 poster showcases: BATSTORM project and ELSA project.
- 6 supporting organisations: EnergyIN, Energy Storage Demand Response and Grid Technologies, Energy Storage News, Energy Storage NL, EUROBAT, Navigant Research.



"Trying to create markets to push energy storage to the next level."

Troy Miller, ESA.



"Hope that the energy market design will unlock market for energy storage."

Alexander Micovčin,
SK Ambassador to the EU.



"Energy storage is a prerequisite for more renewables."

Maroš Šefčovič,
European Commission.



"Energy storage is an increasingly important element of the energy transition."

Piotr Szymanski,
European Commission.



"Storage is here and it is growing."

Luis Costa, GE.



"Energy storage has been undervalued in the past. It needs to be considered in the new European internal market."

Dominique Ristori,
European Commission.



"Energy storage should be allowed to compete on equal basis with other sources of flexibility."

Claudes Turmes, MEP.



"If the EU wants to compete internationally, we need to ramp up funds for R&I in technology, especially for energy storage."

Allan Schrøder Pedersen,
DTU.

- For further information, please visit <http://ease-storage.eu/category/esgc/> or have a look at the ESGC Twitter account: [@ESGlabConf](https://twitter.com/ESGlabConf)



Credit Saft_SEV_Saft Intensium Max on Feroe Islands_Denmark

Clean Energy for All Europeans Package

“Energy storage means, in the electricity system, deferring an amount of the electricity that was generated to the moment of use, either as final energy or converted into another energy carrier”

In November 2016, the European Commission published the “Clean Energy for All Europeans” Package, formerly known as “Winter Package”. The Package consists of 11 legislative and many non-legislative documents aiming to shape the future energy sector within the European Union. The most important proposals for EASE are the Market Design Directive and Regulation which will set the rules for the future electricity market. The proposed legislation could enter into force end-2019/beginning 2020.

The presented proposals are a great step forward for energy storage and EASE, since they formally recognise the importance of energy storage for the energy transition. In particular, the Commission addressed EASE’s request to include an energy storage definition in the proposal for a revised Electricity Directive:

“Energy storage means, in the electricity system, deferring an amount of the electricity that was generated to the moment of use, either as final energy or converted into another energy carrier”.

Another hot topic which will be discussed intensely during 2017 is the question of storage ownership. The Commission proposes that for the ownership of energy storage by regulated entities [e.g., for the provision of system services] in the absence of competitive supply, i.e. if shown that a market-based service procurement is not feasible, such ownership should be exceptional and on a temporary basis, subject to a periodic review of the situation. Unjustified market barriers for energy storage should be removed.

EASE has developed five recommendations and is calling upon the EU institutions to take these into account:

- For energy storage applications deemed to be market services, e.g., arbitrage, only market players should be allowed to own or operate energy storage facilities for their provision. The market should reflect the system needs, which would provide for efficient solutions.

- Therefore, one cannot talk about ownership of energy storage by regulated entities in the abstract; instead, positions can be expressed only relative to energy storage applications or services.
- Energy storage applications deemed to be infrastructure services, i.e., fulfilling services which are today already used by regulated entities with other technologies (e.g., by building a line), should be able to be delivered also with energy storage devices.
- Regarding the ownership of energy storage by regulated entities (e.g., for the provision of system services) in the absence of competitive supply, i.e. if shown that a market-based service procurement is not feasible, such ownership should be exceptional and on a temporary basis, subject to a periodic review of the situation. Unjustified market barriers for energy storage should be removed.
- And, as a general rule, regulated entities could be allowed to own energy storage in this context only upon the approval of the relevant national regulatory authority (NRA). In the longer term, the underlying reason for the market failure should be identified and properly addressed.

The important role of energy storage is also recognised by the fact that the Commission proposes to include energy storage when developing network codes. Since it is important to maximise the added value energy storage can bring to the system, a specific network code on energy storage would allow removing specific hurdles in one document. The proposals also seek to remove some of the other barriers to energy storage, for instance by calling for a market-based procurement of ancillary services, calling for non-discriminatory network charging for storage, and requesting that energy storage be considered in network planning and resource adequacy assessments.

In addition, EASE is pleased that the Commission, in its Communication on Accelerating Clean Energy Innovation, recognises the importance of energy storage by designating it as a priority area for clean energy research and innovation, alongside electro-mobility, decarbonisation of the building stock, and the integration of renewables.

EASE is looking forward to supporting the EU institutions throughout the “Clean Energy for All Europeans” package discussions and will continue to play a constructive role in shaping a fair market design for energy storage.



EASE-EERA Energy Storage Technology Development Roadmap

EASE and the Joint Programme on Energy Storage under the European Energy Research Alliance (EERA) worked together to draft an updated Energy Storage Technology Development Roadmap, which was first published in 2013. With contributions from both research and industry experts, the roadmap provides an in-depth look at the state of energy storage research and deployment in Europe.

The roadmap provides a comprehensive overview of the energy storage technologies being developed in Europe today and identifies the RD&D needs in the coming decades. On this basis, the roadmap provides recommendations for R&D policies and regulatory changes needed to support the development and large-scale deployment of innovative energy storage technologies. The aim is to inform policymakers for research, innovation, and demonstration in the energy storage sector in order to further strengthen Europe's research and industrial competitiveness in the energy storage industry.

EASE-EERA

Roadmap in Numbers

- Contributions from more than 60 stakeholders from research and industry.
- 11 energy storage technologies covered in dedicated chapters.
- 6 market design and 16 RD&D policy recommendations to kick-start the deployment of innovative energy storage technologies.

European Funding for Energy Storage R&D

Given the need for further developments in energy storage research, demonstration, and deployment shaping the R&D landscape for energy storage projects is a key priority for EASE. In 2016, EASE worked with a wide range of stakeholders to shape the EU's R&D priorities for energy storage.

Whereas energy storage received less attention in the past, EASE has helped make energy storage a top priority for the EU's energy R&D agenda. As part of the "Clean Energy for all Europeans" Package, the Commission published a Communication on Accelerating Clean Energy Innovation which laid out a framework for action to increase public and private investments in low-carbon technologies and pushed for the development of clean energy business models. The Communication recognised the importance of energy storage by designating it as a priority area for clean energy research and innovation, alongside electro-mobility, decarbonisation of the building stock, and the integration of renewables.

EASE particularly welcomed the Commission's decision to invest more than €2 billion of the total 2018-2020 Horizon 2020 Work Programme budget in these four areas, a 35% increase compared to 2014-2015. EASE has provided input on all of the past Horizon 2020 Work Programmes and in 2016 began actively participating in discussions around the 2018-2020 energy Work Programme to ensure that it reflects the needs of the energy storage industry.

Throughout 2016, EASE also provided input to several innovative EU-funded projects focused on energy storage, including BATSTORM, RealValue, STORY, eStorage,

and the FCH JU study on "Early business cases for H2 in Energy Storage and more broadly Power to H2 applications".

Going forward, EASE will continue to actively engage on RD&D topics through discussions with the European Commission and Member States representatives, participation in high-level events and workshops, by following Horizon 2020 projects, and by participating in the European Technology and Innovation Platform Smart Networks for the Energy Transition (ETIP SNET).

R&D Milestones in 2016

- **April:** EASE and EERA kicked off work on the revised Energy Storage Technology Development Roadmap.
- **May:** EASE participated in the public consultation on the Energy Union Research, Innovation, and Competitiveness Strategy (later known as the Accelerating Clean Energy Innovation Communication).
- **November:** EASE presented at ERA-Net Smart Grids+ Scoping workshop.
- **November:** publication of the Communication on Accelerating Clean Energy Innovation.
- **November:** EASE attended the SET-Plan Conference in Bratislava.
- **December:** Launch of the ETIP SNET.



Horizon 2020

Grid+Storage Project

In December 2016, after 2 years, **the Grid+Storage project** was concluded.

EASE, with a consortium composed of 5 other international partners carried out the mandate received by the European Commission to support DG Energy in defining a European research and innovation (R&I) strategy in the area of the SET Plan activities related to smart grids and integration of energy storage.

The main deliverables of Grid+Storage project were two **“3-year Implementation Plans”** identifying the short-term R&I priorities and an **“Integrated R&I Roadmap”** for research, demonstration and market uptake of technologies integrating storage solutions into grid research and demonstration (R&D) activities.

During the 2-year project the consortium delivered:

- a short-term integrated Implementation Plan (IP) 2016-2018 based on:
 - the IP 2016-2018 already published by ENTSO-E;
 - the IP 2016-2018 provided by EDSO for Smart Grids;
 - R&DI topics identified by EASE and embedded in the above two IPs with more details about the detailed R&I activities to be addressed when considering storage integration challenges;
 - the inputs and recommendations of a public consultation from 15 respondents.
- The Final 10 year ETIP SNET R&I roadmap covering 2017-26 (RIR) that:
 - updates and extends the R&I activities specified in the previous EEGI roadmap 2013-2022 covering

a larger scope than the electricity system, encompassing interactions with the gas and heat networks and focusing on the integration of energy storage technologies (and taking into account all other flexibility options) into the power system;

- synthesises consolidated and balanced stakeholder views for the future R&I needs of the electricity (and the energy) system and rely on a monitoring and review of national, European and international projects.

The R&I road-mapping for the energy system continues with the H2020 Intensys4EU project that coordinates and supports the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIP SNET). The first deliverable of this project will be the Implementation Plan 2017-2020, which is based on the ETIP-SNET R&I roadmap 2017-2026 (published in January 2017) which specifies the long-term R&I targets for the evolution of the European energy system.

For further information on the Grid+Storage project and its deliverables, please visit www.gridplusstorage.eu.



Horizon 2020

Intensys4EU Project and Support to the ETIP SNET

In November 2016, EASE with a consortium of eight international partners, was selected by the European Commission (through a Coordination and Support Action) to support as Secretariat – thought the “Integrated Energy System: a Pathway for Europe” project - the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIP SNET) for a period of 4 years (2016/2020).

The main goals of the Project are:

- To support the further integration of innovative solutions in view of hosting a major share of variable renewables by 2030 while operating the energy system in a safe, stable and secure way;
- To extend the existing research, development and innovation roadmaps through permanent and direct interactions with the impacted energy system stakeholders and all the Member States in view of validating the portfolio of innovative solutions via appropriate funding mechanisms.

Together with the other partners, EASE supports the activities of the new ETIP SNET.

This platform:

- has been created by the European Commission in the framework of the EU's new Integrated Roadmap of the Strategic Energy Technology Plan (the SET Plan) – Europe's energy RD&I master plan;
- supports the SET Plan Key Action n°4 “Increase the resilience, security and smartness of the energy system” that addresses the technical challenges raised by the transformation of the energy system;
- guides research, development and innovation to support Europe's energy transition with innovation for the transmission and distribution systems;
- gathers a wide range of stakeholders which are to contribute to the energy transition, divided in five Working Groups.

Three EASE members will be covering the position of Chair and Vice-Chairs of the Working Group 2 “*Storage technologies and sector interfaces*” for the first 2 years of activities and EASE Vice-President, Thierry Le Boucher, is Vice-Chairman in the ETIP SNET Governing Board for a year.

Join us for the next steps and activities during the 4 years of INTESYS4EU project:



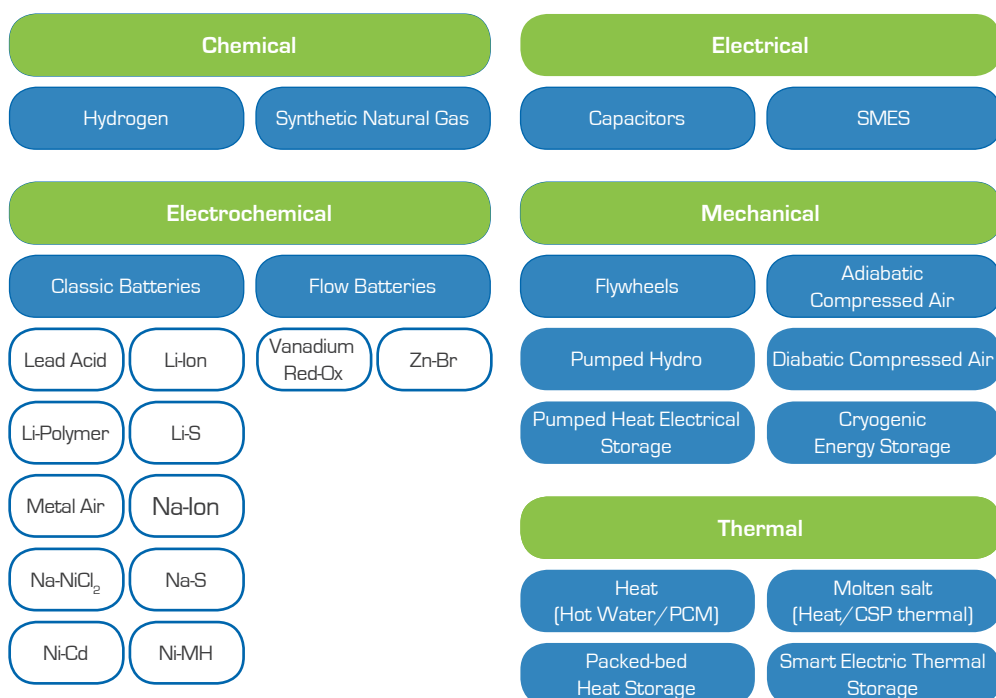


Uniper Nadine Schulte Pelkum M5BAT plant

EASE Technology Families

EASE supports all energy storage technologies and believes that energy storage needs to be addressed agnostically. To better deal with the complexity of energy storage technologies, EASE has split the

technologies up into five classes: chemical, electrical, electrochemical, mechanical and thermal. The list intends to be illustrative rather than exhaustive.



EASE also produced a set of Technology Descriptions, corresponding to the subsets of the five energy storage classes.

To read them, please visit:

<http://ease-storage.eu/energy-storage/technologies>.

Energy Storage Applications

Energy storage provides many important benefits to the energy system. It can be integrated at various levels, from power generation to transmission and distribution to the consumer. Energy storage does not fit neatly into any of these three segments but plays a role in all of them. Indeed, one of the most valuable attributes of energy storage is that most of its devices offer several services along the entire energy

value chain. Therefore, energy storage is often referred to as the fourth element of the energy system. To illustrate the uses and benefits of energy storage, EASE identifies and describes a comprehensive set of energy storage applications and organises them by segment of the energy system. As this is a living document, it is updated regularly:



Renewable Generation

- Distributed generation flexibility
- Capacity firming
- Limitation use of upstream disturbances
- Curtailment minimisation



Conventional Generation

- Support to conventional generation
- Black start
- Arbitrage



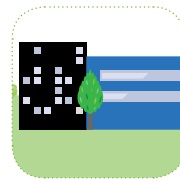
Transmission

- Participation to the primary frequency control
- Participation to the secondary frequency control
- Participation to the tertiary frequency control
- Participation to angular stability
- Investment deferral
- Improvement of the frequency stability of weak grids



Distribution

- Capacity support
- Reactive power compensation
- Distribution power quality
- Limitation of upstream disturbances
- Intentional islanding
- Contingency grid support
- Dynamic local voltage control



Customer Services

- Continuity of energy supply
- End-user peak shaving
- Time-of-use energy cost management
- Particular requirements in power quality
- Compensation of the reactive power
- Limitation of upstream disturbances



EASE Structure

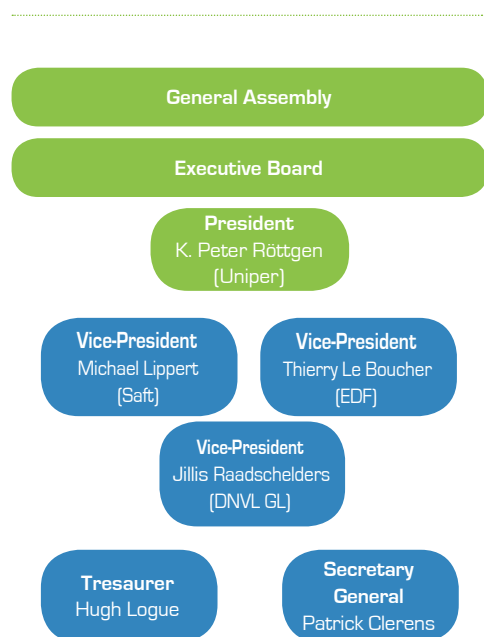
EASE has several bodies dedicated to the various aspects of energy storage and the associated challenges and opportunities.

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

The **Technology and Value Assessment Committee**, chaired by David Post (Enel), is the main committee responsible for acquiring and delivering hard data.

The **Strategy Committee**, chaired by Michel Matheu (EDF), is dedicated to developing and executing a medium- and long-term vision, outlook and perspectives on the development of policies related to Energy Storage and its industry in Europe.

The **Communications Committee**, chaired by Michael Lippert (Saft), has as its mission to inform external stakeholders about the benefits Energy Storage has to offer.



EASE Secretary General



Secretary General
Patrick Clerens



Policy Officer
Brittney Becker



**Communications
Officer**
Michela Bortolotti



Technical Advisor
Jean-Michel
Durand



Project Officer
Maria Laura
Trifiletti



Project Officer
Marine
Delhommeau

EASE Partners

EASE is continuously in discussion with partners who share the same goal of contributing to the development of a sustainable energy system.

One example of is the biannual meetings with interested European National Energy Storage Associations. In these meetings, information

is exchanged, support is given to valuable initiatives and shared fields of interest are discussed. In 2016, representatives from Austria, Germany, Italy, the Netherlands, Portugal, and the UK came together in Brussels to discuss energy storage challenges and opportunities across Europe.

National Energy Storage Associations



EASE Value to Members

European Association for Storage of Energy brings together the many diverse players currently investigating the role of energy storage in the future evolution of Europe's energy system within a single, coherent body of competence and influence.

Why become an EASE member?

By joining us you will have the chance to...

- ... **stimulate** the development of innovative energy storage technologies and energy storage uses.
- ... **foster** the European implementation of energy storage technologies in the energy & climate policy context.
- ... **promote** and **support** both the analysis and the impact of the use of energy storage in the enhancement of the grid reliability.
- ... **benefit** from and **opt in** to shared cost studies and to have **exclusive access** to EASE internal technical data.
- ... **access** EASE expertise from R&D, consulting, industries and utilities.
- ... **exchange** technical information or issues with other members of EASE.
- ... **increase** awareness and knowledge of European industry, academics and EU officials regarding the need for energy storage technologies.
- ... **provide** expertise for specific requests of EU bodies on energy storage technologies.
- ... **cooperate** with other European associations or stakeholders on energy storage-relevant topics, including sister associations like ESA, CESA, CNESA or NY-BEST.
- ... **maintaining** links to storage users' associations like Smart Grids.
- ... **network** with other members of EASE and other leading European storage experts.
- ... **take part** in our activities and annual event.
- ... **participate** in the consensus building between members in order to define EASE common positions and communicate them at European and international level.

● For further information, please visit:
www.ease-storage.eu/about-ease/get-involved/



What to Expect in 2017?

INTENSYS4EU Regional Workshops

In 2017, within the framework of the European project INTENSYS4EU, **4 Yearly Regional Workshops** will be organised on behalf of the **ETIP SNET**. The aim of these workshops is to share knowledge between on-going projects in the Member States, to collect R&I recommendations and lessons learnt from the projects and to nourish the definition of future R&I activities. Each workshop will invite between 12 and 20 R&I **national or regional projects**. The 4 workshops will be organised along **4 main panels** corresponding to each of the **ETIP SNET WG1 to WG4 scopes**. One of the main focus will be on storage technologies and sector interfaces (ETIP SNET WG2).

TSO 2020: "Electric Transmission and Storage Options along TEN-E and TEN-T corridors for 2020" Project

EASE won – as partner – the TSO-2020 project which is the biggest project out of the 7 projects selected under the Connecting Europe Facility (CEF) funding instrument. EASE – in partnership with the Dutch Ministry of Infrastructure and Environment, TenneT TSO, Nederlandse Gasunie, Green

Planet Real Estate, TU Delft, and Stichting Energy Valley – will assess and value the key role of energy storage in the electricity transmission system by exploiting synergies between energy storage solutions and alternative transport infrastructure needs.

EASE Investor Workshop

Following a suggestion by its members, EASE will organise an Investor Workshop in November 2017. The workshop will bring together energy storage project developers and investors to identify the key indicators to allow for a good and profitable investment in energy storage; enable match-making between these investors and energy storage project developers; and identify the barriers encountered by investors who wish to fund energy storage projects.

EASE-EERA Energy Storage Technology Development Roadmap

Comments from a wide range of stakeholders were received during a public consultation period and a workshop held in Brussels. The Roadmap is expected to be published towards the end of 2017.

Energy Storage Student Award

Also in 2017, EASE will give an award to a MSc or PhD student who has shown great promise in the field of energy storage. The award winner will be granted travel and accommodation to attend EASE's Annual Event. Additionally, she/he will be invited to present their thesis to the relevant EASE committees and, perhaps, help conduct relevant research.

EASE Annual Event

On 22 November 2017, EASE will hold an Annual Event in Brussels, which will bring together EASE members, EU policymakers, and key stakeholders with an interest in energy storage and the energy transition more broadly.

EASE participation in various events

Throughout 2017 EASE will speak at and attend several events such as:

- Energy Storage Association (ESA) Annual Conference – Denver (CO), 18-20 April 2017.

EASE will present during the session "Global Markets Part II: Europe and North America" on 20 April 2017.

- China Energy Storage Alliance (CNESA) Conference & Expo – Beijing, 22-24 May 2017.

An update on the current regulatory situation for energy storage in Europe will be given in a session together with other international energy storage associations.

- European Sustainable Energy Week (EUSEW) – Brussels, 19-25 June 2017

Together with EDSO for Smart Grids, ENTSO-E and ETIP SNET, EASE will organise a session titled "Energy storage & digitalisation empowering consumers in the energy transition". The session will take place on 21 June 2017.

- Power Gen Europe Renewable Energy World Europe – Cologne, 27-29 June 2017

On 29 June 2017, EASE will give a presentation during the session "Why Energy Storage?". Additionally, the Secretariat will be present with a booth to answer questions from attendees.

- European Utility Week – Amsterdam, 3-5 October 2017.

EASE will moderate the session "New Rules for Storage" and will take part in the panel "How to Enable the Grid of the Future".

If you want to receive regular updates on EASE's activities, please visit www.ease-storage.eu and follow us on Twitter (@EASE_ES) and LinkedIn!



Closing by Secretary General

Reflecting back on 2016, I am struck by how far the energy storage sector progressed in this year alone. In 2016, energy storage captured the attention of both policymakers and the public. Furthermore, installed capacity grew precipitously around the world and big strides were taken both at EU and Member State level to create a level playing field for energy storage technologies. It was a whirlwind of a year, and the momentum we have built shows no signs of stopping.

Storage has made an indelible mark on the energy sector and is finally being recognised as a key contributor to the EU's decarbonisation efforts. EASE strives to ensure that energy storage can reach its full potential in terms of supporting the cost-effective integration of variable renewables into the system, building a safe and reliable energy system, and ensuring the active participation of consumers.

Guided by this vision, EASE worked on many different fronts to share information on the role and value of energy storage, achieve a fair market design, and to support energy storage research, development, and deployment.

Preparing the 'Clean Energy for All Europeans' Package proposals was a top priority for EASE in 2016, as we sought to address the key barriers hampering the deployment of energy storage. EASE worked hard to clarify high-level principles – for instance, on ownership of energy storage by regulated entities – to ensure a fair energy market design. We also provided more detailed and technical input on topics ranging from the network codes to the assessment of storage projects in the Ten-Year Network Development Plan. All of these efforts are vital to granting long-term investment security for the European energy storage industry.

On the research and development front, we kicked off work on the second EASE-EERA Energy Storage Technology Development Roadmap, finalised our Grid + Storage roadmap, and participated in the newly established European Technology and Innovation Platform 'Smart Networks for the Energy Transition'. Through these initiatives, EASE helped guide technology neutral research and development policy with the aim of stimulating developments across all energy storage technologies.



In all of these efforts, EASE was fortunate to work with a wide range of stakeholders – including policymakers, fellow associations, national energy storage associations, and leading industry players – to discuss and work towards achieving the energy system of the future. In particular, our second Energy Storage Global Conference in September 2016 was an outstanding opportunity to bring together some of the leading thinkers and doers in the energy storage field. We look forward to our next conference in 2018 and to all of the events and presences that EASE will participate in throughout 2017.

Of course, 2016 also marked EASE's fifth anniversary. There is no denying that EASE has come a long way since its early days. Since our founding in 2011, EASE has welcomed many new members, all of whom are deeply committed to supporting the transition to a more sustainable, efficient, consumer-centric, and flexible energy system. I am grateful to all members for their passion and dedication and I am inspired by their ground-breaking work on a wide range of storage technologies. Without their valuable contributions, none of EASE's achievements would be possible.

I therefore wish to close with a warm thank you to all EASE members as well as all other stakeholders who have worked with us throughout the years. I am counting on all of you to help us build on the successes of 2016 in 2017 and beyond!

Warm regards,

Patrick Clerens
Secretary General



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