



# The Perspective from Europe

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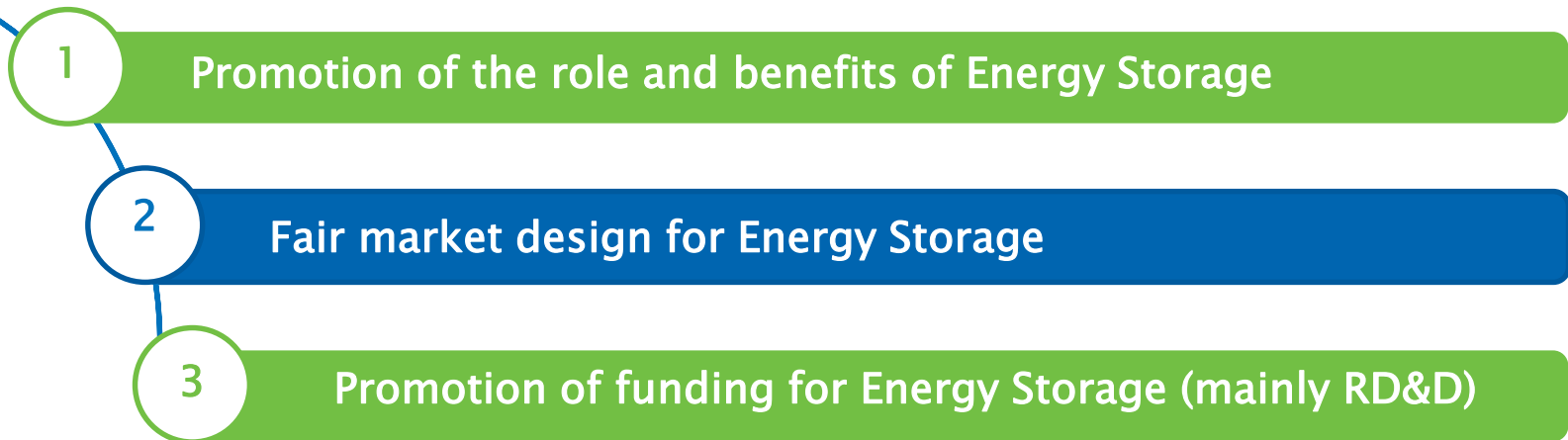


# Introduction to EASE

## European Association for Storage of Energy...

- ...is the European **voice** of the Energy Storage community
- ...advocates the **role of Energy Storage** as an indispensable instrument for the energy system
- ...supports a **sustainable**, **flexible** and **stable** energy system
- ...**shares** and **disseminates** information

### Strategic objectives:





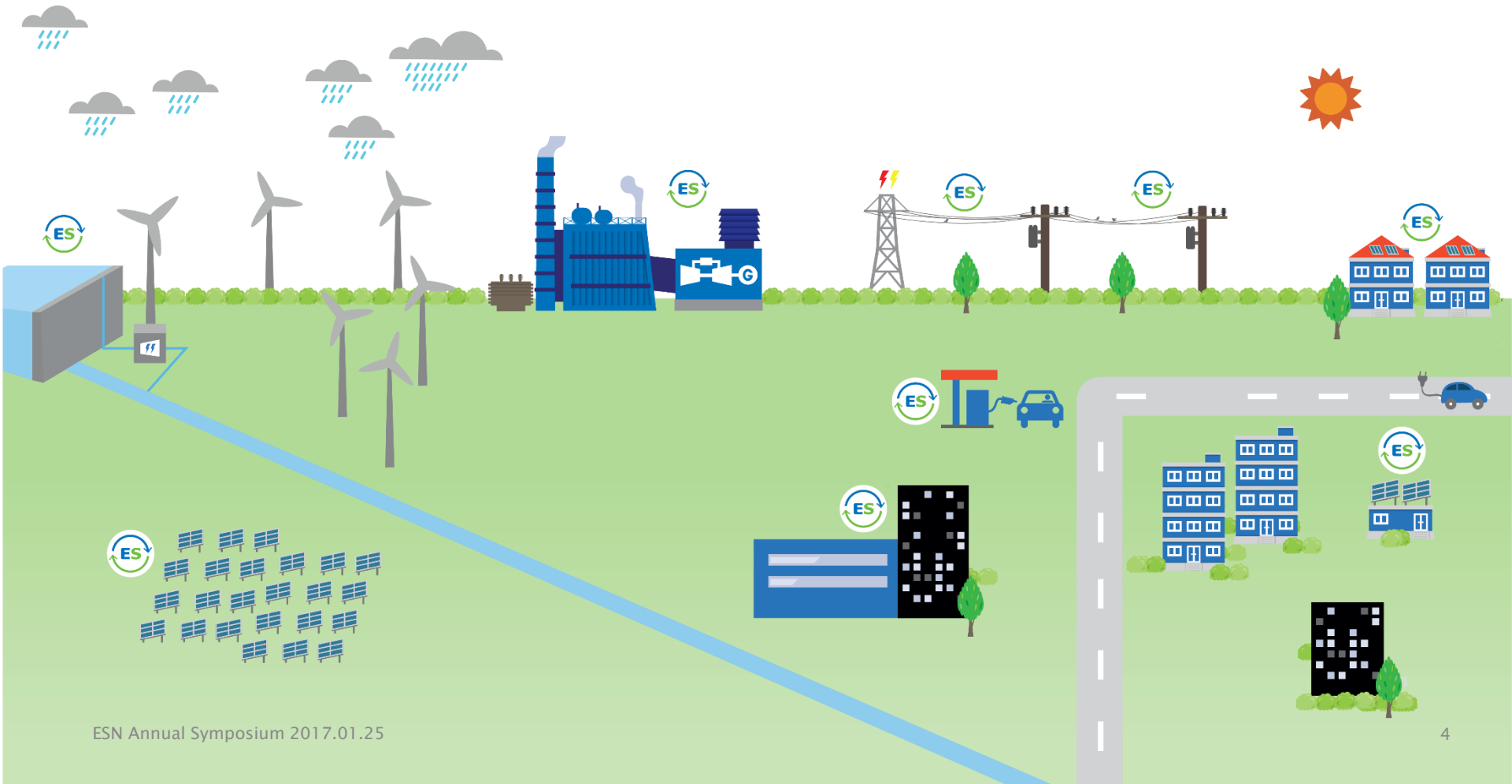
# EASE Members





# Energy Storage in the energy system

Energy Storage is being deployed at all levels of the grid, but significant regulatory barriers remain





# “Clean Energy for All” Package – market design elements



“Clean Energy for All” Package of legislative and non-legislative measures, issued 30.11.2016, including:

*Proposal for a revised Electricity Directive*

*Proposal for a revised Electricity Regulation*

Electricity Regulation will have direct effect in Member State law

Electricity Directive will have to be transposed into Member State legislation

Legislation could enter into force end-2019, just as UK is exiting EU



# Definition of Energy Storage

## Top policy priority

- As proposed by EASE, an Energy Storage definition has been included in the “Clean Energy for All” Package proposals 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”*

- This **robust and broad definition** does not limit Energy Storage to electricity-in/electricity-out; rather, it encompasses “power-to-x” and thermal Energy Storage systems
- The definition is needed to **create investment certainty** for European industry and to **properly situate Energy Storage in the regulatory framework**, alongside generation and demand



# Definition of Energy Storage

## Desired improvements/amendments

- Replacing “generated” with “produced” or a similar verb to have no explicit link to generation assets:

*“energy storage means, in the electricity system, deferring an amount of the electricity that was **produced** to the moment of use, either as final energy or converted into another energy carrier”*
- Establishing Energy Storage as a separate asset class, the 4th element along with generation, distribution/transmission and consumption, as proposed by the European Parliament in the “Towards a New Energy Market Design” Report (Sept. 2016)



# Ownership by regulated entities

## Unbundling rules for transmission and distribution system operators (TSOs and DSOs)

- Generally, TSOs and DSOs not allowed to
  - *“own, develop, manage or operate energy storage facilities”*
- By way of derogation, TSOs and DSOs can own Energy Storage when:
  - other parties, following an open and transparent tendering procedure, have not expressed their interest
  - such facilities are necessary for the distribution system operators to fulfil its obligations under this regulation for the efficient, reliable and secure operation of the distribution system
  - a relevant national regulatory authority (NRA) has assessed situation and granted its approval
- Periodic review (e.g. every 5 years) may reverse derogation





# Ownership by TSOs and DSOs

## EASE position (1 / 2)

- 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.



# Ownership by TSOs and DSOs

## EASE position (2/2)

- 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. In the longer term, the underlying reason for the market failure should be identified and properly addressed.



# Level playing field

- “Clean Energy for All” proposal for a revised Electricity Directive:
  - *“Member States shall ensure that their national legislation does not unduly hamper cross-border flows of electricity, consumer participation including through demand-side response, investments into flexible energy generation, energy storage, the deployment of electro-mobility or new interconnectors, and that electricity prices reflect actual demand and supply”*
- Identifies Energy Storage as a system element important for cross-border electricity flows
- Implies the elimination of all wholesale and retail price caps



# Insufficient market access

- “Clean Energy for All” proposal for a revised Electricity Directive:
  - *“Unless justified by a cost–benefit analysis, the procurement of non–frequency ancillary services by a distribution system operator shall be transparent, non–discriminatory and market–based ensuring effective participation of all market participants including renewable energy sources, demand response, energy storage facilities and aggregators, [...]”*
- This and similar provisions establish market–based procurement of ancillary services, including the participation of Energy Storage



# Unwarranted network charges

- “Clean Energy for All” proposal for a revised Electricity Regulation:
  - *“Charges applied by network operators for access to networks, including charges for connection to the networks, charges for use of networks, and, where applicable, charges for related network reinforcements, shall be transparent, applied in a non-discriminatory manner [...]. In particular, they shall be applied in a way which [...] does not discriminate against energy storage [...]”*
- Identifies Energy Storage as a system element that should be specifically subject to non-discrimination in network charging policy



# Technical standards

- “Clean Energy for All” proposal for a revised Electricity Regulation:
  - “The Commission is empowered to adopt delegated acts in accordance with Article 63 concerning the establishment of network codes in the following areas:[...]”*
  - (n) demand response, including aggregation, energy storage, and demand curtailment rules”*
- Foresees the development of a network code on Energy Storage access conditions



# “Clean Energy for All” Package

- Energy Storage features strongly across the market design reforms
- Policy advances proposed by the European Commission should be solidified with support in the European Parliament and Council
- Amendments could be proposed to strengthen position of energy storage, e.g.,
  - Separate asset class
  - Ownership linked to application/service type not as derogation
  - Implementation of scarcity pricing and congestion pricing



# Thank you for your attention.

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