

Batteries in Europe

–

Storage Market, Status of Energy Storage in Europe, and key Developments

28 October 2020

Webinar on Energy Storage

Patrick Clerens

EASE Secretary General



European Association
for Storage of Energy

Introduction to EASE





European Association
for Storage of Energy

2030 FRAMEWORK FOR CLIMATE AND ENERGY AGREED TARGETS



European Association
for Storage of Energy

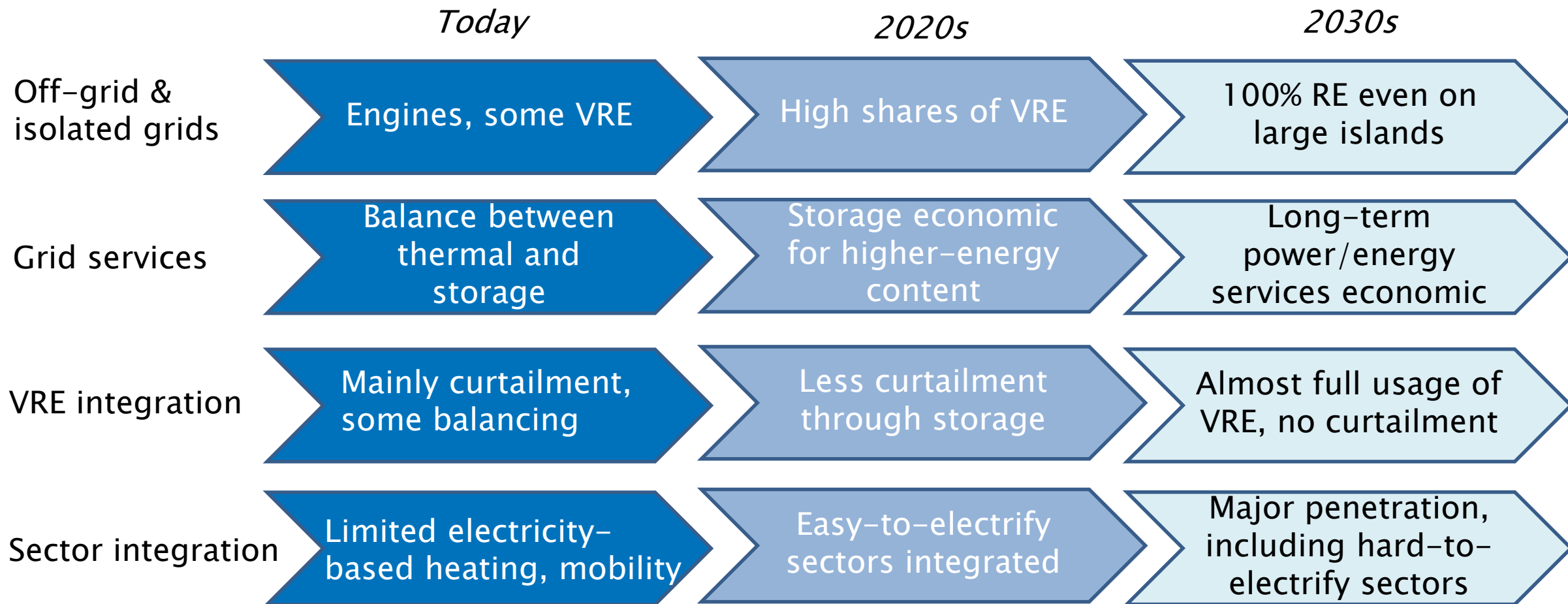
	GREENHOUSE GAS EMISSIONS	RENEWABLE ENERGY	ENERGY EFFICIENCY
2020	-20%	20%	20%
2030	≤ -40%	≤ 32%	≤ 32.5%



The European Commission is proposing to cut net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels, up from our current target for 2030 of at least 40%.

Future energy system

In 2030, the landscape will be completely different



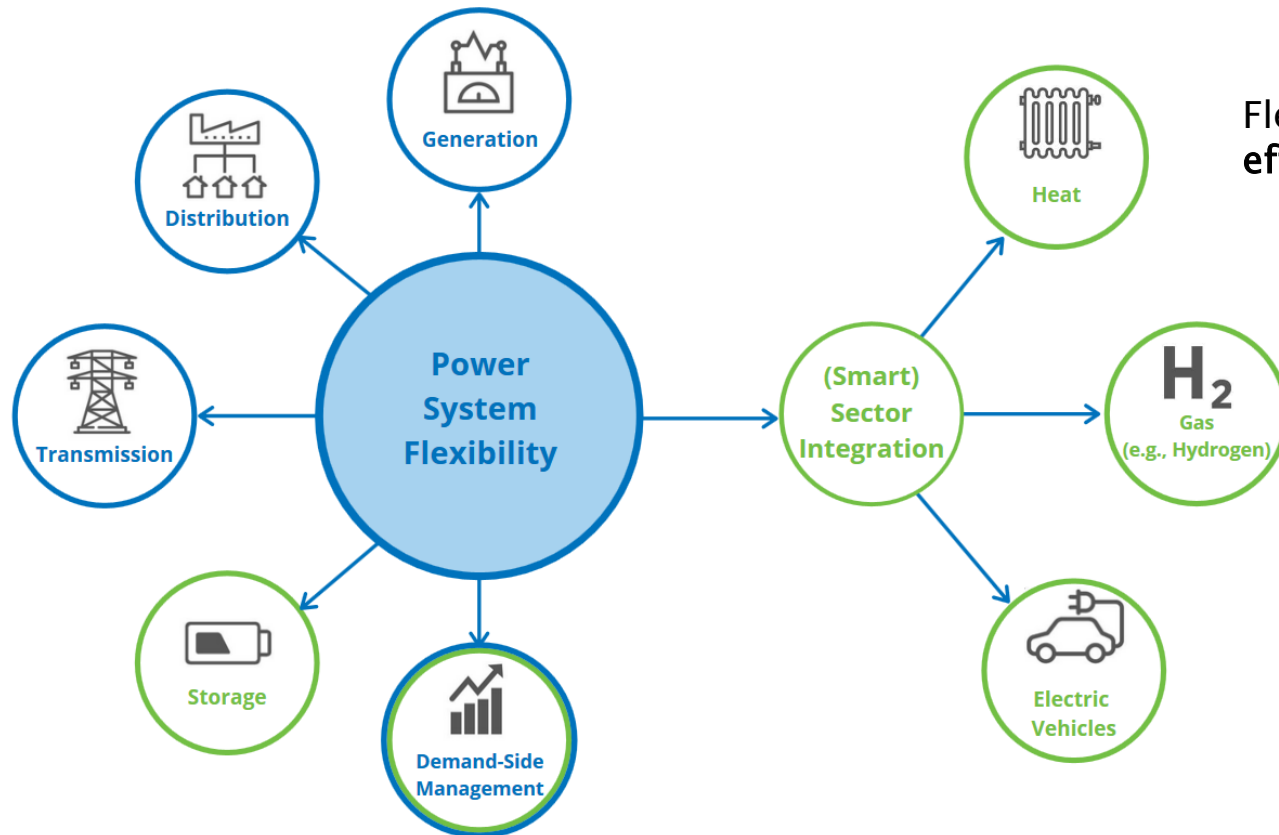
Challenges of the energy transition



integrating Renewable Energy Sources in a cost efficient way entails significant challenges!

The role of energy storage

To achieve the ambitious RES target new flexibility sources have to be deployed to integrate these vRES with **minimum curtailment** and at **optimised system cost**



Flexibility plays a crucial role in ensuring **secure and cost-effective** operation of the network / the grid

Energy storage provide flexibility to the system at **various time-scales**, from seconds and hours to weeks and months

Energy storage offers highly **reliable, predictable, and accurate flexibility** services to the grid, totally **independently from external factors** (weather, time or season, consumer behaviour, etc.)

Challenges of the energy transition

Increase in need for flexibility

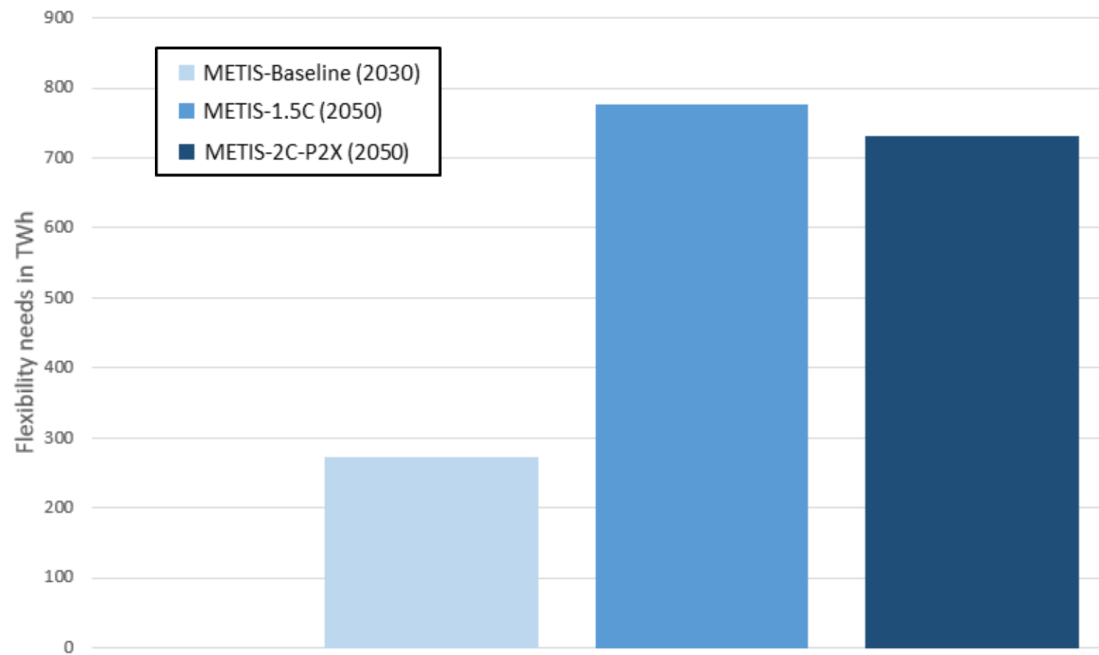


Figure 16 - Daily flexibility needs at EU28 level

- *EU 2030 scenario: power demand of at least 3500TWh*
- *EU 2050 scenarios power demand of at least >7000TWh*

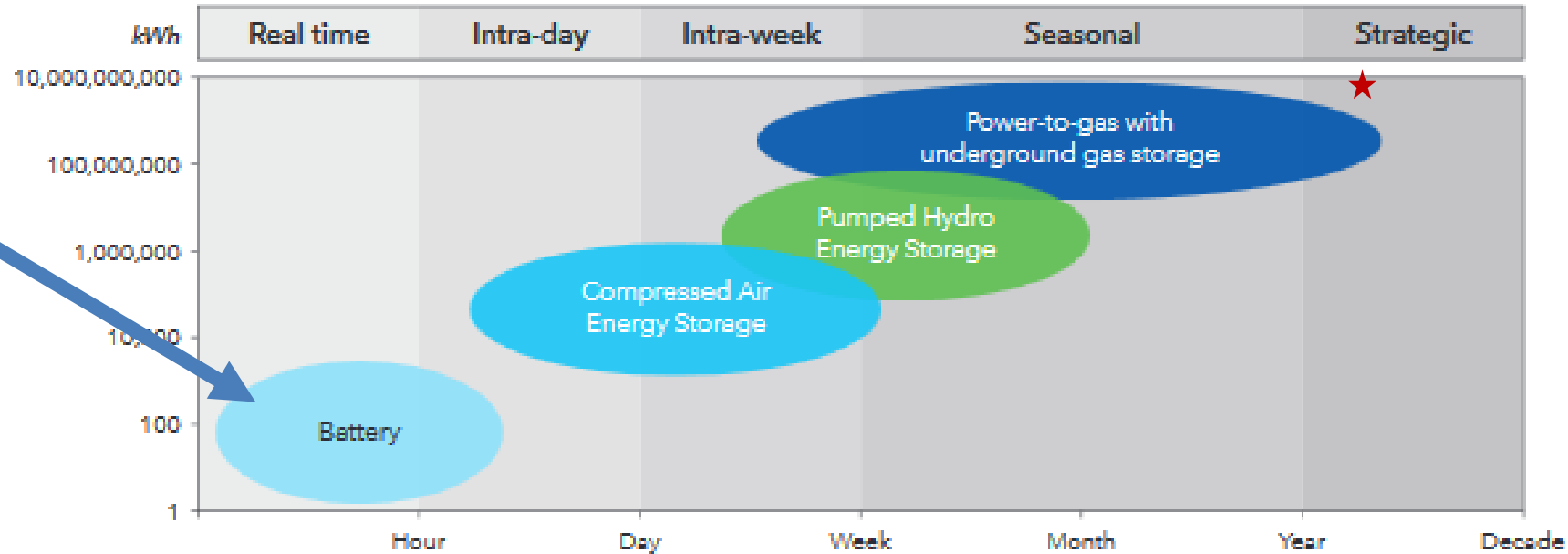


Storage is the key flexibility provider

Source: European Commission, [Study on Energy Storage](#), 2020

The role of energy storage

Short and long-term energy storage technologies

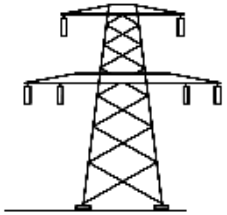


★ These are only four of many technologies

- Different energy technologies can be used for different timeframes

Energy Storage Market

Significant changes in the past years



Front of the Meter

- ❖ New market products/ancillary services for new value streams, e.g.
 - ❖ Fast Reserve in Italy
 - ❖ Firm Frequency Response in the UK



Commercial & Industrial

- ❖ New, dramatically diverse business cases across Europe
 - ✓ Agriculture: dairy industry to provide peak shaving in Ireland...
 - ✓ Public buildings to improve energy efficiency in Switzerland...
 - ✓ To energy storage for industrial processes in Germany

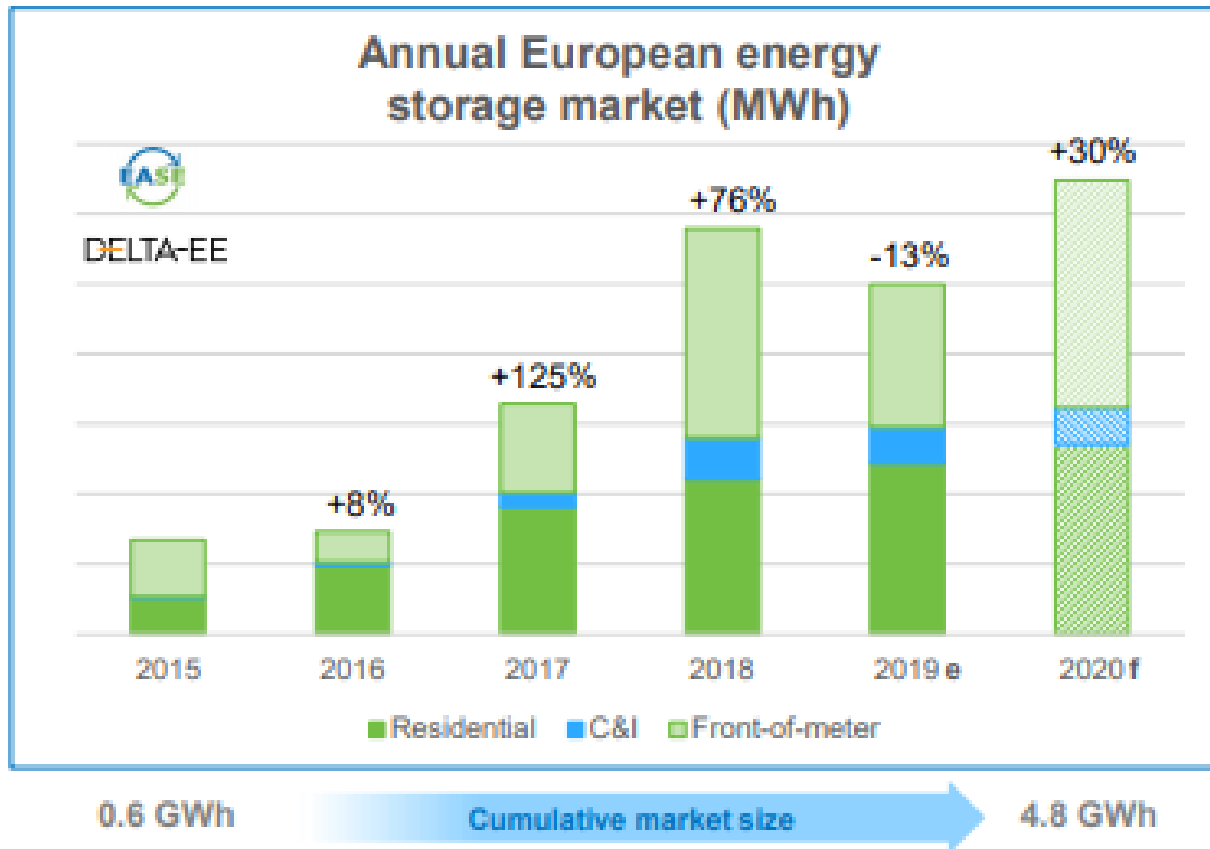


Behind the Meter

- ❖ New business models based on IoT, smart services
- ❖ Growing customer awareness
- ❖ Emergence of “energy communities”

The role of energy storage

Higher uptake, lower costs for energy storage solutions



But how does the EU support the Battery Sector?

EU Industrial and Research Initiatives

Do EU initiatives foster batteries and energy storage?



EU Battery Alliance (EBA)
Creating a competitive
manufacturing value chain



Batteries Europe
Reunite R&I stakeholders to set
priorities and mobilise resources



Batteries 2030+
long-term research
programme

EU Industrial and Research Initiatives

Does EU initiatives foster batteries and energy storage?

- ❖ These three initiatives make European R&I and industry in this field significantly stronger than in the past...
 - ❖ ...although interdependence/competition from Asian countries present



- ❖ Europe is among the market leaders in several sectors of the batteries value chain...
- ❖ Technologies are dramatically changing, Europe may have the opportunity to take the lead from a research and industry point of view



European Association
for Storage of Energy



European Association
for Storage of Energy

Conclusions

- ❖ The energy transition entails significant challenges
- ❖ Energy storage **can and shall play a key role** in addressing them through a wide arrays of solutions
- ❖ **Battery technologies** are one of the key storage technologies



European Association
for Storage of Energy

EASE – European Association for Storage of Energy

Avenue Adolphe Lacomblé 59/8

BE – 1030 Brussels

Tel: +32 2 743 29 82 | Fax: +32 2 743 29 90

[@EASE_ES](https://twitter.com/EASE_ES)

info@ease-storage.eu

www.ease-storage.eu

