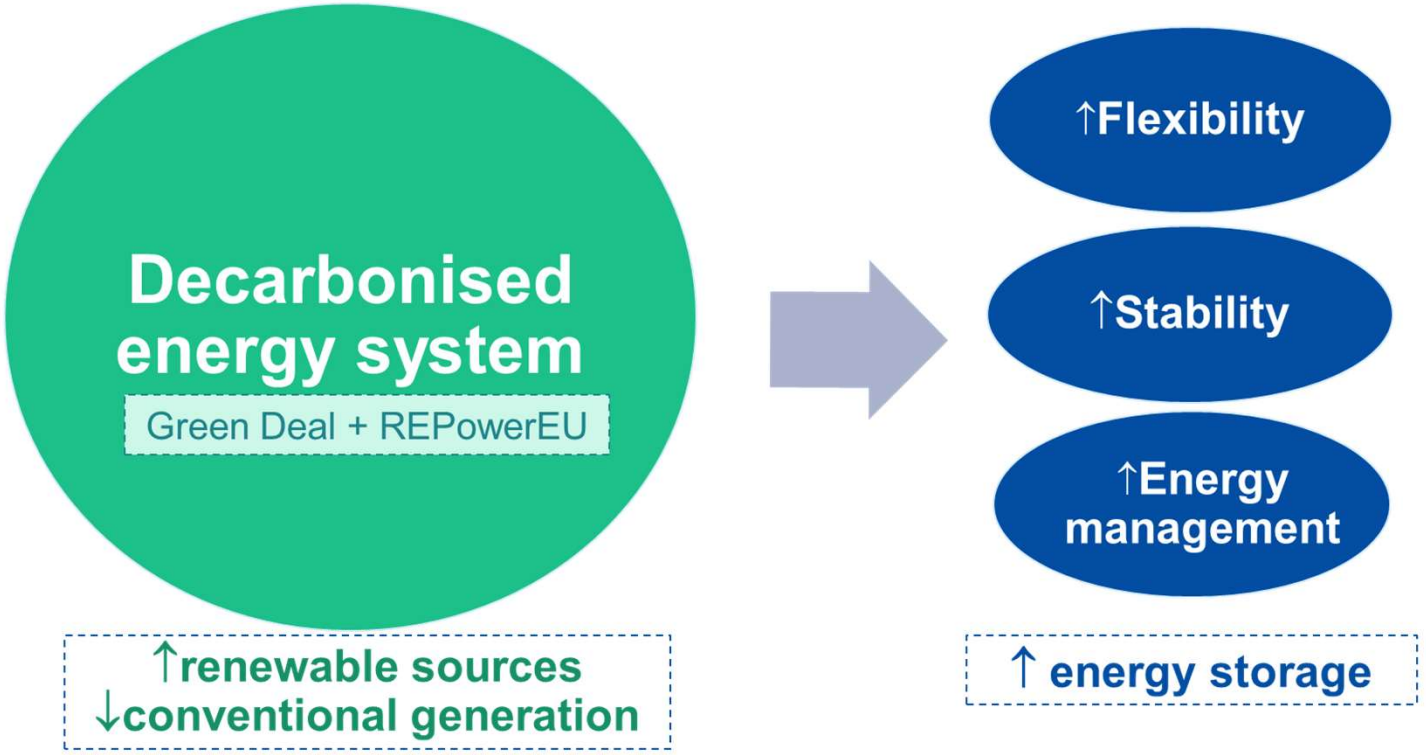
Energy storage – Underpinning a decarbonised and secure energy system

Energy Community workshop on storage technologies

14 November 2023

Why a new recommendation on energy storage?



Recommendation
and
SWD
on energy storage

European Commission

Summary of the recommendations

- **Regulatory:**
  - **Double role of 'consumer-producer' -** removing barriers, network design and charges and tariff schemes
  - **Flexibility needs** in the energy system + objectives AND related policies and measures
  - **Networks**: potential of energy storage, possible alternative, in planning + access + operation
  - **Barriers** for demand response and 'behind-the-meter'

- **Financing:**
  - **Financing gaps** – instruments providing stability and predictability
  - **Monetisation of services provided** – revenue stacking
  - **Competitive bidding processes** + design of **capacity mechanisms**

Summary of the recommendations

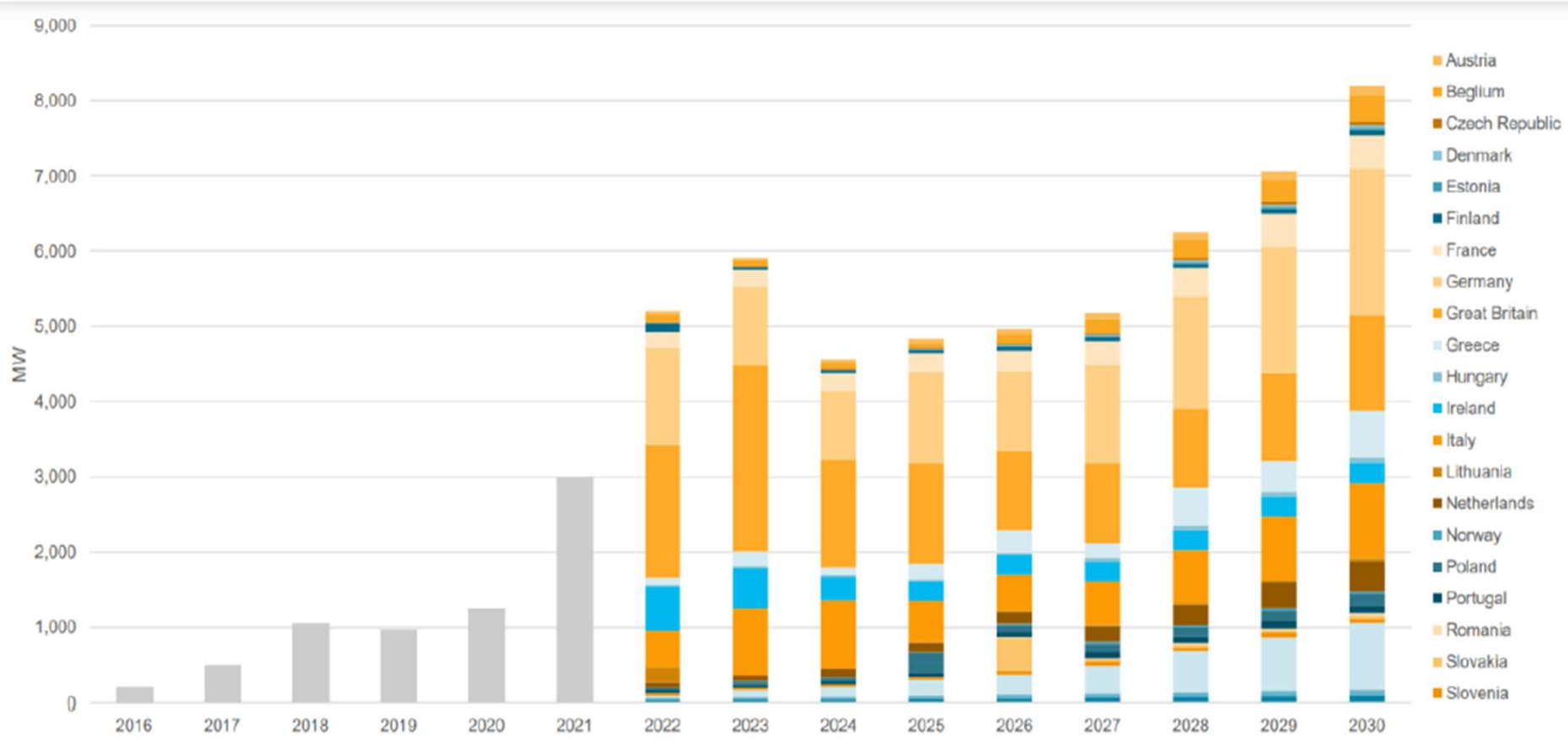
- Accelerate energy storage deployment in **islands and remote areas**
- **Publication of important market data** (e.g. renewables curtailment, existing facilities) to facilitate storage investments
- **R&D** (including optimization) + consideration of de-risking instruments

Staff Working Document – the basis

- Main **pillars**:
  - **Role of flexibility and energy storage in energy transition** - increasing needs for flexibility, applications, global outlook
  - **EU regulatory framework and initiatives** - policy framework & public financing
  - **Uptake of energy storage** – needs, best practices and opportunities

- The SWD largely relies on research results from two studies:
  - EnTEC - Study on Energy Storage (https://op.europa.eu/s/yd5M)
  - EC JRC - Flexible requirements and the role of energy storage in the future power systems (https://op.europa.eu/s/yd5O)

Forecast annual battery installations per MS



Source: EASE and Delta EE, June 2022

European Commission

EU regulatory framework

- **Existing EU legislation and initiatives**: H_2, Fit for 55, Governance Regulation
- **Electricity market design** (EMD): definition, participation of storage and flexibility services in the electricity market, CMs
- **Public financing and EU support**: MFF and NGEU (Recovery and Resilience)
- **Research and innovation**: Horizon Europe, Partnership programmes, Strategic Energy Technology (SET), LIFE

Increasing uptake of energy storages

- 1. Appropriate financing environment:
  - **wider revenue stacking**
  - **long-term visibility and predictability of revenues** (reducing risk profile and facilitate decision making achieved by:
  - **specific supporting tools and enabling signals**: e.g. decarbonized capacity contracts, CfDs, energy saving performance contracts, etc.

- 2. Grid and permits fit for storage
  - **role of storage in network planning**,
  - Special storage specificities

Increasing uptake of energy storages

- 3. Resilient energy storage supply chains
  - **EU's list of critical raw materials**, (many battery related material included).
  - **Commission action plan on critical raw materials:** to tackle vulnerabilities in raw-material supply chains
  - **European Critical Raw Materials Act** to strengthen monitoring, the EU value chain and external policies on critical raw materials
- 4. Best practices and opportunities
  - **favourable market conditions, regulatory signals** at MS level
  - **opportunities in the electricity markets** (implementation of EU electricity legislation, CMs, especially for long-duration storage, the future network code on DS flexibility)
  - **behind the meter storages** (need for proper (sub)metering)
  - increasing need for **market data transparency, granularity and availability** + sophisticated analytical tools and models

What's next?

- After the adoption of the recommendation: monitoring, how they are implemented in the Member States
- During the EMD negotiations: Initiative from the EP on proposing a 'European Storage Strategy' by 2025, EU level flexibility and storage targets
- 2024: EP elections and the next Commission: political priorities?
- Storage is likely to remain in the centre of interest and energy policy making at EU level and in the Member States