



Policy and regulatory framework for storage in EU

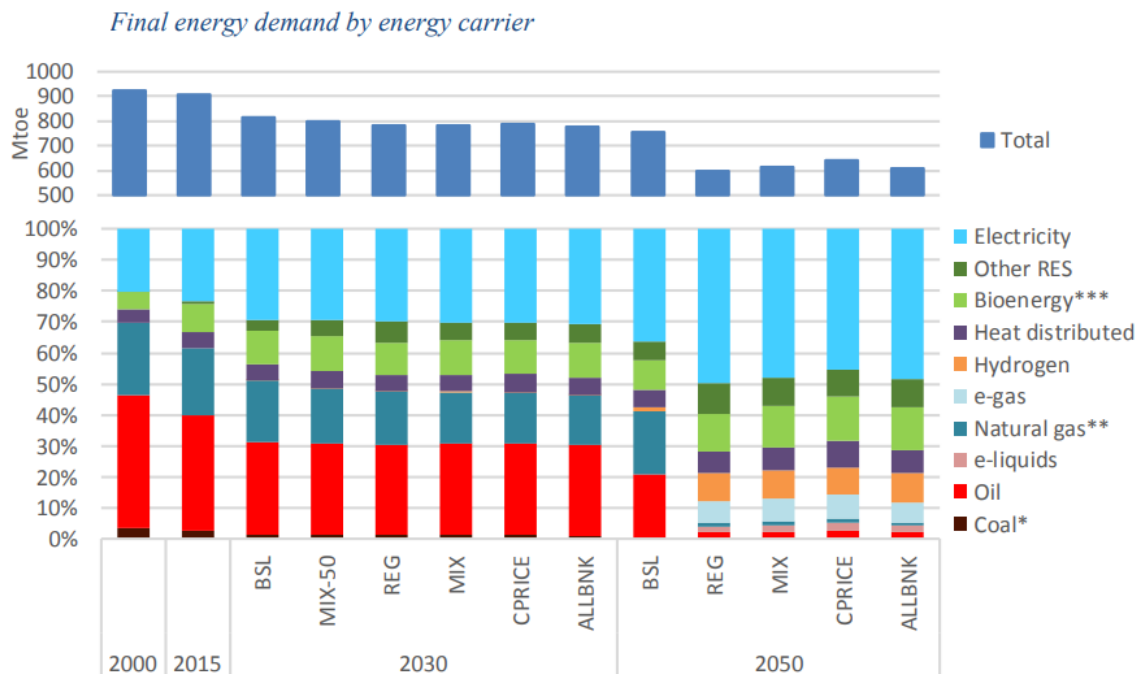
EU-INDIA

Webinar on Manufacturing and deployment of battery storage systems

16 December 2021

The EU to be climate neutral by 2050

- The **European Green Deal** provides an action plan for the EU to be climate neutral in 2050.
- The **European Climate Law** turns this political commitment into a legal obligation, including 55% net emission reduction by 2030.



Energy account for more than 75% of the EU's GHG emissions: More RES needed

2030 → ~ 65% RES in the grid

Key role of energy storage

- Energy storage could:
 - facilitate the **electrification** of the economy and the **integration of renewables**;
 - increase the **flexibility and security of the energy system**;
 - lower **electricity prices** during peak times → Communication tackling rising energy prices
- Energy storage should be **market-based activity**.
- **Energy storage technologies compete** with each other and with other flexibility sources, such as flexible generation and demand response.

➤ *In July 2020 the European Parliament adopted a resolution on energy storage, which provides a comprehensive overview and explores the potential of energy storage in the EU.*

Study on energy storage

Contribution to the security of the electricity supply in Europe

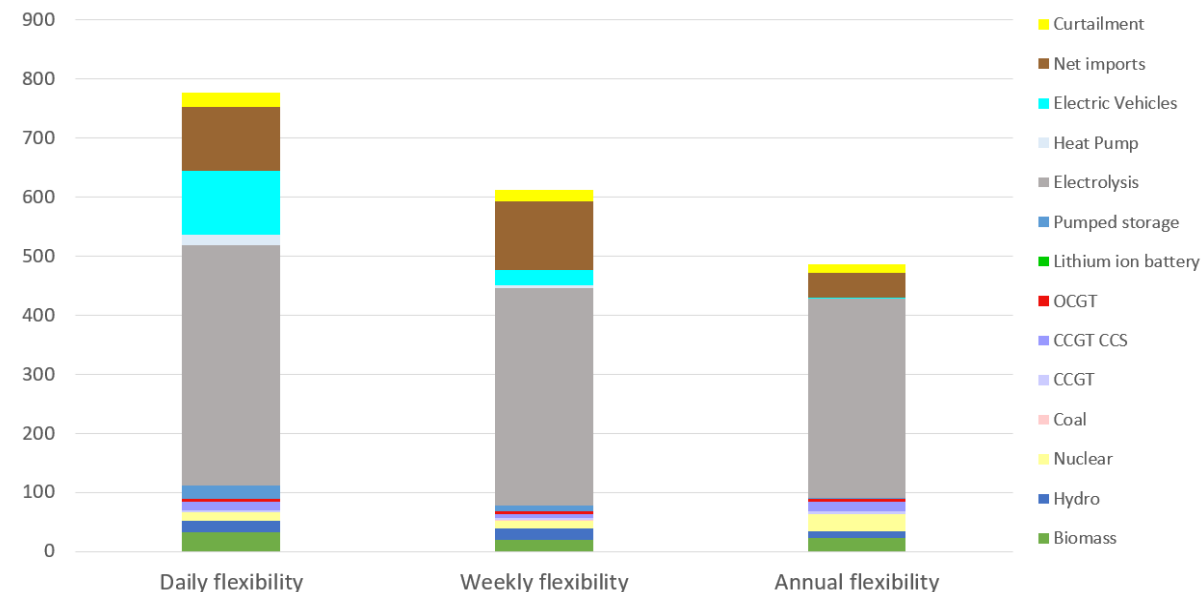
- Study on energy storage, published in May 2020:
 - Creating a first **database** of storage facilities in the EU.
 - Assessing EU **flexibility needs** for 2030 and 2050 in the electricity system.
 - Identifying regulatory **barriers** and providing **recommendations** in the EU.



Study on energy storage

Increase need for system flexibility in 2030 and 2050

- Several technologies compete to provide flexibility to the energy system:
 - Key role of **batteries** and **pumped-hydro** storage in the short term.
 - Key role of **electrolysers** in the long term, driven by the need to decarbonize different sectors.
 - High potential of **electric vehicles** and **thermal storage** to provide daily flexibility.



Contribution to the provision of flexibility for METIS-1.5C in 2050 (TWh)

EU regulation - Clean Energy Package

- Electricity market design adopted in 2019:
 - Energy storage **definition**, accommodating the different storage technologies.
 - Competitive, consumer-centred, flexible and non-discriminatory **electricity markets**:
 - Participation of energy storage in the market and provision of flexibility services at a level playing field with other energy resources.
 - Promotion of aggregation, dynamic prices, smart metering and storage for active consumers.
 - **Limited role for system operators**, which can be involved in storage activities to ensure reliable and secure operation but only under certain conditions.

Cross-cutting relevance and initiatives

- Energy **system integration** and **hydrogen** strategies.
- Renovation wave and performance of **buildings**.
- **Electromobility** and alternative fuel infrastructure (V2G services).
- Sustainability of **batteries** (second life and recycling).
- Attention to critical **raw materials and supply chains** for energy technologies.
- **Research and innovation** funding under H2020, Horizon Europe and Innovation Fund.
- **Taxonomy** and **Energy taxation** (contributor to climate change adaptation and mitigation).
- Eligible to receive **public funds** from the Recovery and Resilience Facility and from Invest EU.

- *The Fit for 55 package proposal includes some initiatives relevant for energy storage:*
- *REDII: increasing renewable targets; additional demand for flexibility and storage.*
 - *EED: encouraging demand response and storage.*
 - *ETD: avoiding the risk of double taxation.*
 - Revised CO2 standards for cars and vans, AFIR, FuelEU Maritime or ReFuelEU Aviation.

Next steps

- Continue supporting the **development of future-proof energy storage**.
- Identify **key EU actions for the development** of storage as a key flexibility tool, both for short to medium-term and long-term storage options.

- Dedicated workshops to identify financing difficulties, adequate economic signals and specific regulatory barriers for energy storage:
 - *October 2021: EUSEW session on “Energy Storage – Financing and economic signals”*

Thank you

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