INAUGURATION KEYNOTE

Flexibility and the role of cross-border infrastructure Is the policy framework up to speed?











Agenda

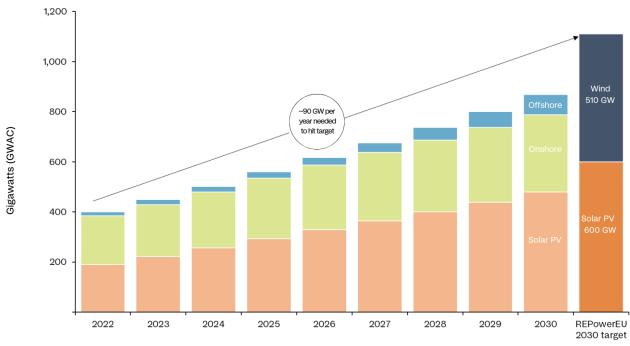
- 1 Flexibility needs
- **2** Current Policy Framework
- **3** Observations in View of the Grids Package

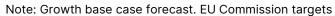
Agenda

- 1 Flexibility needs
- 2 Current Policy Framework
- **3** Observations in View of the Grids Package

Increasing production variability

Cumulative renewable energy growth in the EU compared to REPowerEU target

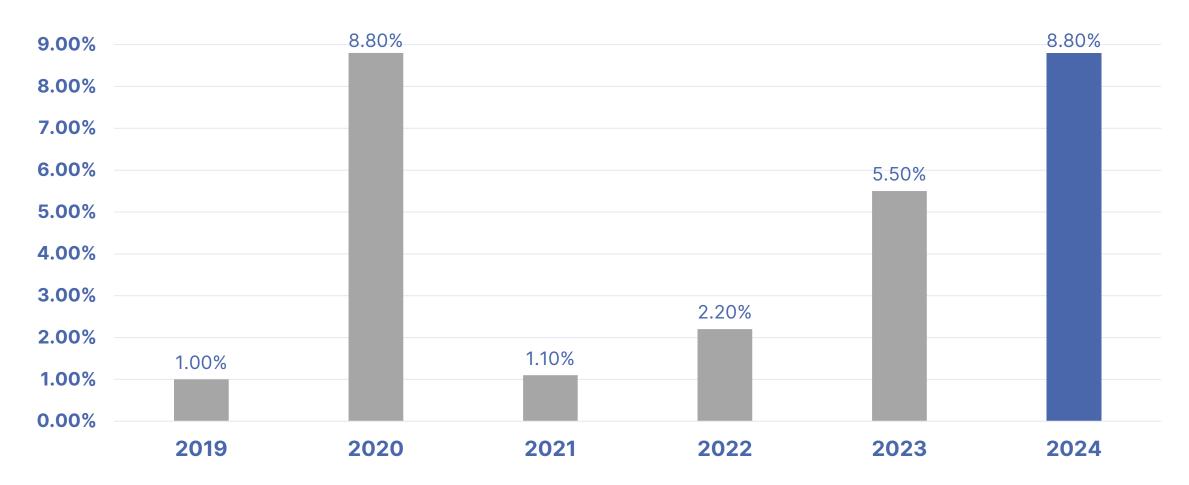






More price variability and negative prices

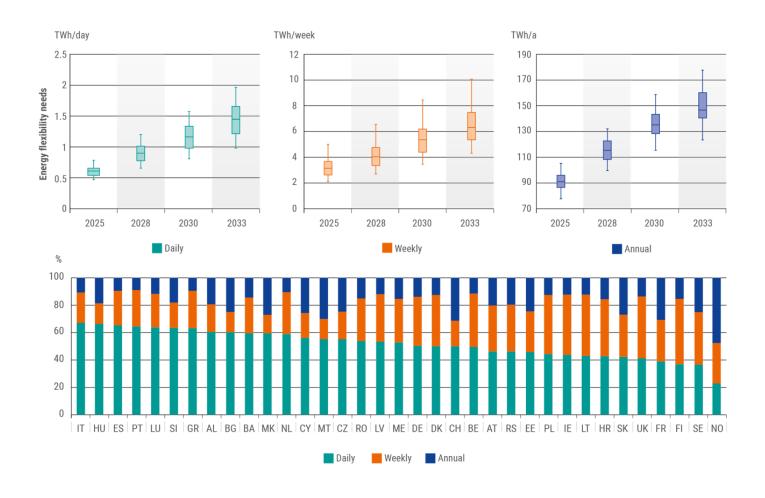
Annual percentage of the time when prices were <5EUR/MWh, EU-27+Norway, 2019-2024 (%)





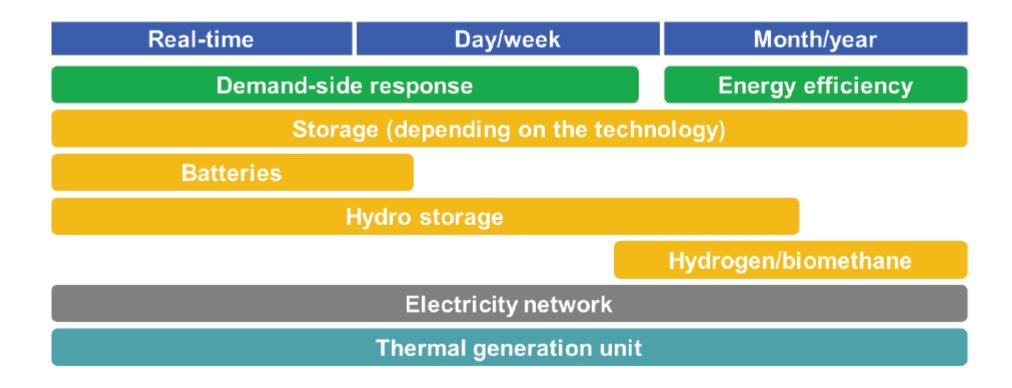


Flexibility needs





Many technological solutions







More renewables in the system will...

- > Domestic production, less dependency
- > Better energy security
- > Lower prices
- > More variability
- More congestion
- > More curtailment
- Higher cost
- > Before getting better, challenges may occur on the way





Agenda

- 1 Flexibility needs
- 2 Current Policy Framework
- **3** Observations in View of the Grids Package





Broad set of policies already in place

- 1. Electricity target model
- 2. Electricity market design (EMD)
 - Flexibility needs assesment
 - Renewable support scheme design
- 3. Adequate grid infrastructure (TEN-E)





1 - Development of the internal energy market

« Software »

1st Package
"First common
rules for the
internal market and
liberalisation"

Partial liberalisation

2nd Package "Speeding up liberalisation and market integration"

Full market opening; obligation for Member States to establish a regulator independent from industry; legal & functional unbundling

3rd Package "EU-wide Institutional & Regulatory Framework"

Reinforcing unbundling; harmonised crossborder rules; strengthened NRAs independence and powers; establishment of EU actors ACER & ENTSOs Clean Energy for All Europeans Package (CEP) "More robust EU Framework"

Enhanced energy market design; reinforcing ACER & ENTSOs roles; strengthening regulatory oversight; creation of Regional Coordination Centres and EU DSO Entity; emphasis on consumers

Electricity Market Design (EMD) Revision

Revision of the market design mainly to promote long-term contracts

Hydrogen and decarbonised gas market package

Enhanced gas market design and specific provisions for 'clean' hydrogen

1996

1998

2003

2005

2009

2019

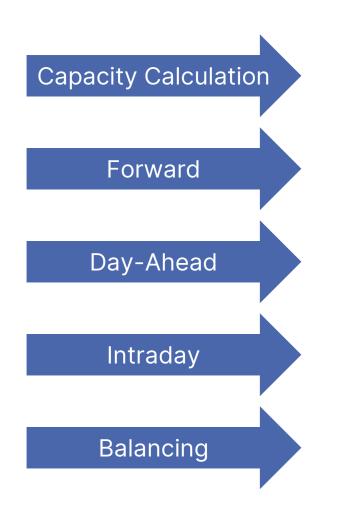
2024

In parallel, development of the « hardware » RED I, II, III, TEN-E



1 - The Electricity Target Model

... for the forward, day-ahead, intraday and balancing timeframes



OPTIMAL BIDDING ZONES + FLOW-BASED to optimise the use of infrastructure

SINGLE EU RULES AND ALLOCATION PLATFORM to allocate transmission rights

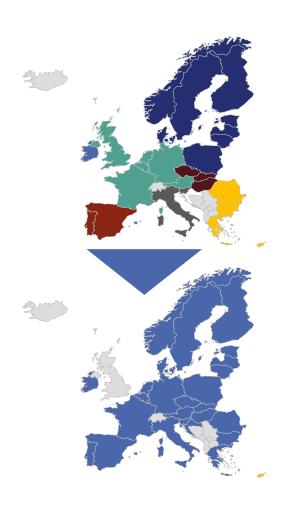
SINGLE EU-WIDE (AUCTION-BASED) PRICE COUPLING to optimise cross-border capacity use

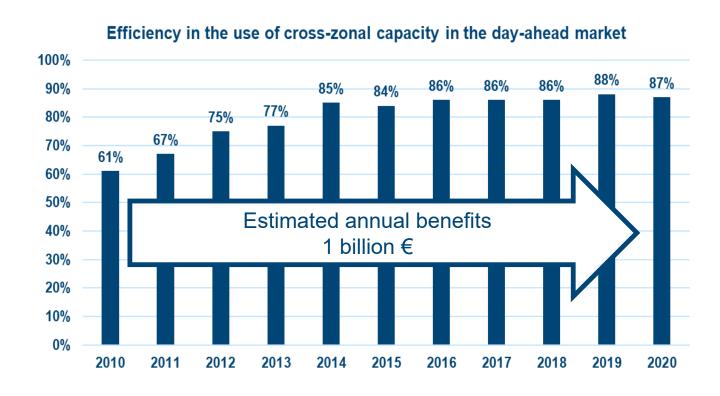
SINGLE EU-WIDE (CONTINUOUS) CROSS-BORDER TRADING with (three) auctions

SINGLE EU COMMON MERIT ORDER LIST for all balancing energy products

1 - Internal Electricity Market - Day-ahead Market Coupling

EU Regulation on Capacity Allocation and Congestion Management







2 - Electricity market design (EMD)

Flexibility needs assessment

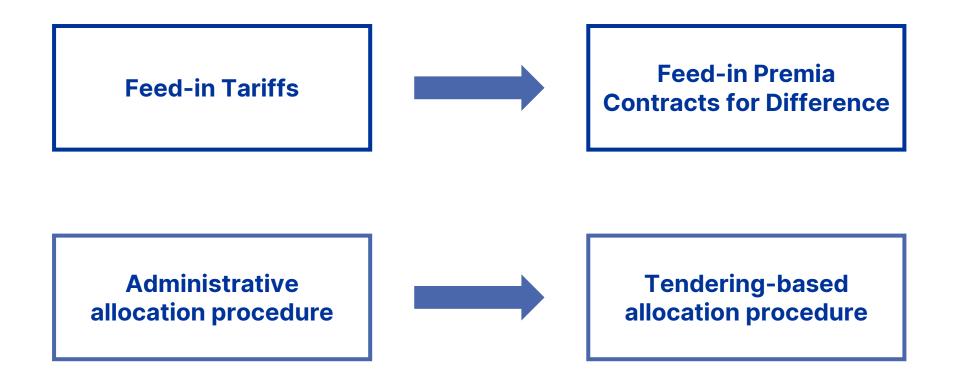
- Member States to assess flexibility needs from very short to long term
- ENTSO-E to develop a methodology, ACER to approve
- Member States to set objectives for non-fossil flexibility
- Member States may design a support scheme or amend capacity mechanism





2 - Electricity market design (EMD)

Renewable support schemes







2 - Priority dispatch coming to an end

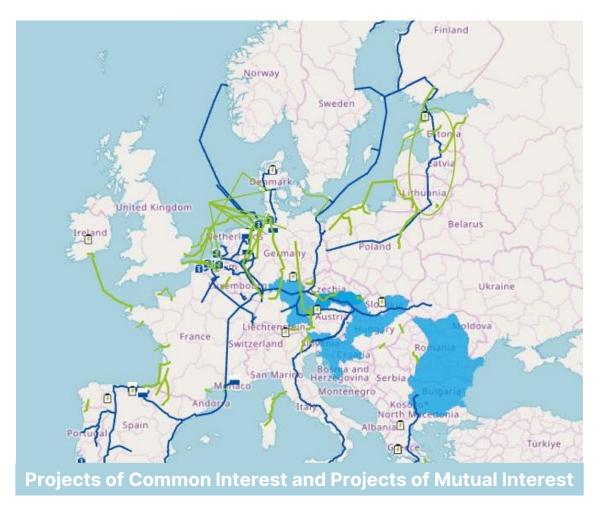
- In the "old days", with "average cost-based" systems, typical of vertically-integrated monopolies, priority dispatch implied a "slight" increase in total costs (especially because the share of renewable-based generation was limited)
- With "marginal cost-based" systems, and regional market integration based on equilibrium price differentials,
 priority dispatch may "distort" the equilibrium prices and result in distortions of energy flows
- > From support to a technology to a "function" or to "system service"





3 - Adequate infrastructure

Trans-European networks for energy



- ENTSOs to develop a Europe-wide 10-year network development plan
- Scenarios developed jointly
- Regional cooperation to select the most urgent and important projects with significant crossborder impact (PCI - Projects of Common Interest)
- Toolbox to speed up implementation (permitting, regulation, financing)

Agenda

- 1 Flexibility needs
- **2** Current Policy Framework
- **3** Observations in View of the Grids Package





Trends affecting energy infrastructure development

Electrification

More grids and capacity

Decentralisation

More local grids

Variability

More efficient grids

Geopolitical risks

Better protected and resilient grids





3 areas & 21 measures for improvement

- Simplify & streamline
- Remove bureaucracy from PCI selection process
- Simplify scenario building
- Create a 28th best practice regime for permitting

- Strenghten governance
- Regional cooperation as tool
- Strong effective monitoring

- Fill gaps
- Measures that digitalise, protect and bring resilience
- High-capacity electricity corridors for 2040/2050
- Non-regret minimum grid for H2 and CO2 by 2035
- Think local





Summary

- The new energy world will not be « more of the same » of the past
- It will be a journey, and it will a learning process
- Policies are largely in place, some adjustment is needed to simplify and to strenghten implementation
- Many questions for research, e.g.
 - Human behaviour and demand response
 - Decision making under uncertainty, investments
 - Technology costs, competitivenes and affordability
 - Harmonisation vs subsidiarity, innovation
 - Implementation





Thank you!





Literature

- ACER (2022): ACER's Final Assessment of the EU Wholesale Electricity Market Design,
 https://www.acer.europa.eu/sites/default/files/documents/Publications/Final_Assessment_EU_Wholesale_Electricity_Market_Design.pdf
- ACER (2025): ACER report on key developments in European electricity and gas markets, March 2025,
 https://www.acer.europa.eu/sites/default/files/documents/Publications/2025_ACER_Gas_Electricity_Key_Developments.pdf
- entsoe (2025): System Flexibility Needs for the Energy Transition, https://www.entsoe.eu/system-flexibility/
- Rystad Energy RenewableCube (2023): Explainer: examining options for the EU as it competes for clean tech sovereignty, https://www.rystadenergy.com/news/explainer-examining-options-for-the-eu-as-it-competes-for-clean-tech-sovereignty



