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Financing and de-risking of cross-border energy infrastructure investments

Informal Ministerial Meeting – Council Presidency of Belgium
Brussels on 15 – 16 April 2024

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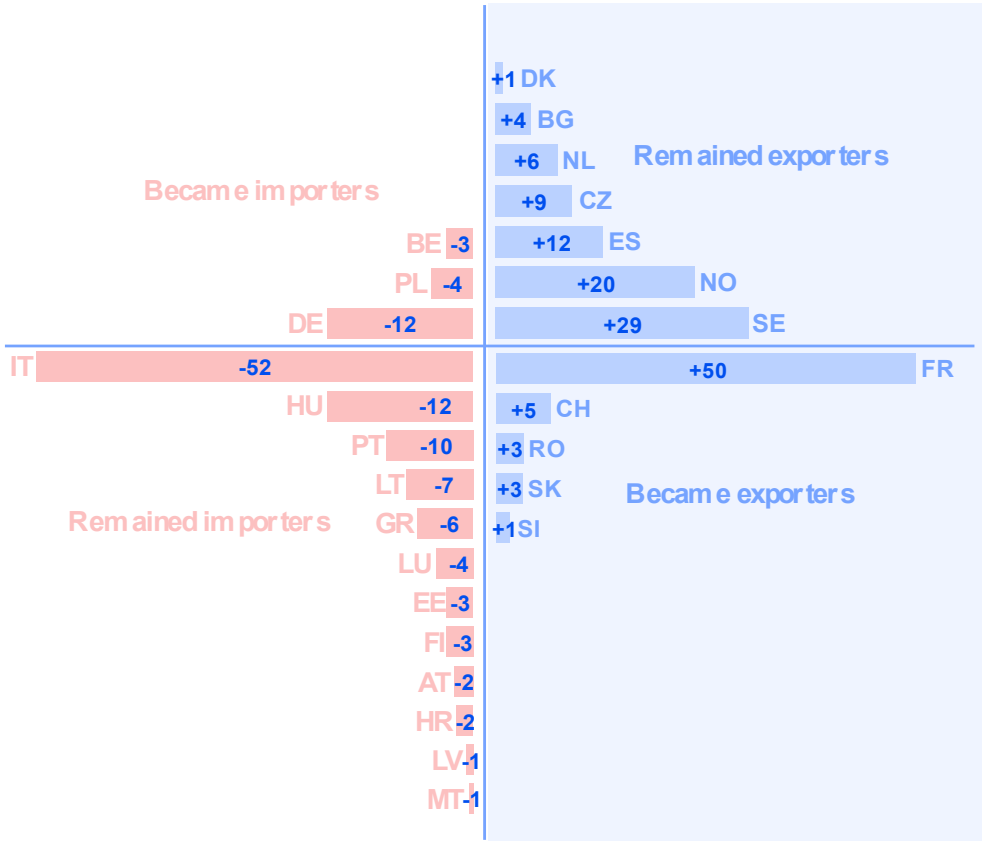
Agenda

- '*We are where we are*' … yet how to get from here to scale?
- Further regionalisation of select processes and measures
- Allocating risk is (of course) key; but which risks to tackle & by whom when so multi-facetted?
- Offshore's future is linked to onshore
- '*Trust but verify*': Got it; but verifying what exactly & how?

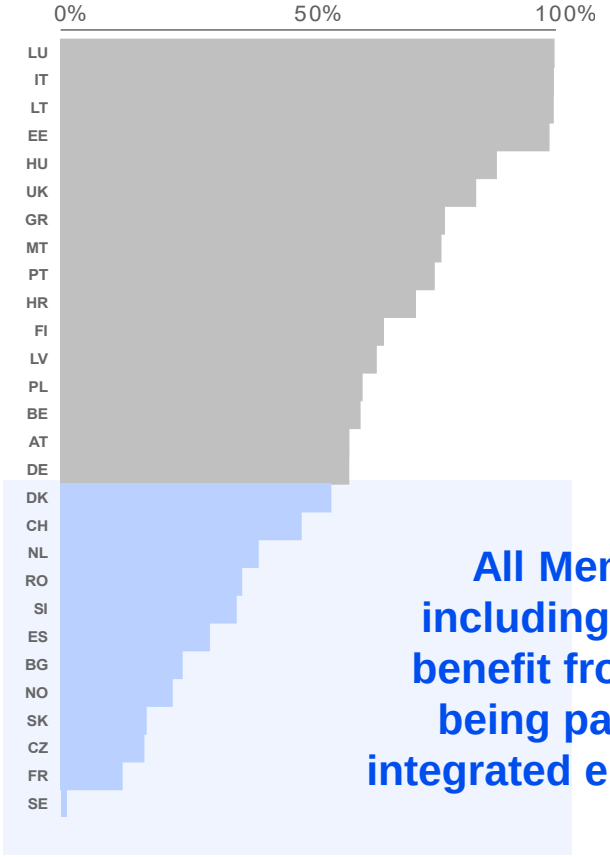
Import and export patterns vary, yet confirm interdependence

In 2023, every Member State benefitted from imports at times, showing the importance of cross-border capacity being available for trading with neighbours

Import-export swings and net positions from 2022 to 2023, EU-27 (TWh)



Percentage of electricity net import hours in the EU-27 /EEA(Norway), Switzerland, 2023



All Member States, including net exporters, benefit from imports and being part of Europe's integrated electricity market.

Source: ACER's report on key developments in the electricity market, March 2024

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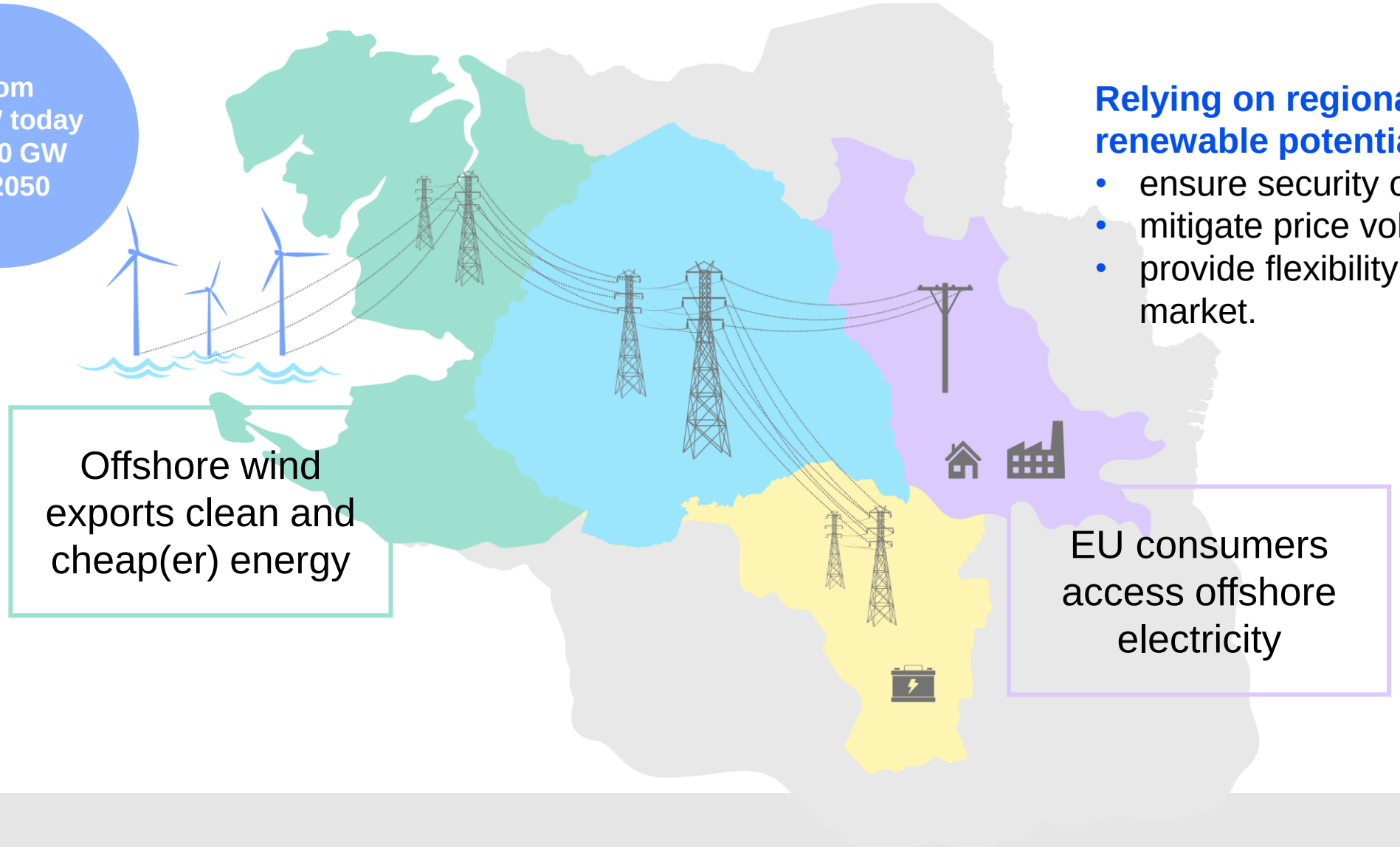
Offshore could be leveraged for massive regional benefits

From
15 GW today
to 300 GW
by 2050



Offshore wind exports clean and cheap(er) energy

Relying on regional renewable potential to:

- ensure security of supply;
- mitigate price volatility;
- provide flexibility to the market.

EU consumers access offshore electricity

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A regional perspective requires further ‘regionalisation’ of processes & measures for financing

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Current financing framework not fully fit for (future) purpose

Networks are funded through various scattered financial streams involving many stakeholders:

- Cross-border cost allocation (CBCA) focuses on bilateral cost-sharing
- Inter-TSO compensation (ITC) as a scheme covers close-to-negligible amounts
- Congestion income (‘rents’) is primarily used to reduce national network tariffs

Infrastructure cost-sharing is currently mainly bilateral, thus not reflecting the wider (regional) distribution of benefits from infrastructure build-out.

EU funding can help cover some of these wider benefits but is unlikely to be a ‘silver bullet’ to fund all/most offshore-related infrastructure.

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'You will finance (or share costs) per benefits you believe in'

Financial institutions will fund infrastructure costs provided they trust the related benefits/revenue flows (alternatively, if someone else covers the risks).

The same holds for Member State Treasuries.

Hence, fully trustworthy/trackable/transparent/replicable cost-benefit analyses (CBAs) of infrastructure investment – meaning, performed or at least validated by public authorities – can enhance this trust.

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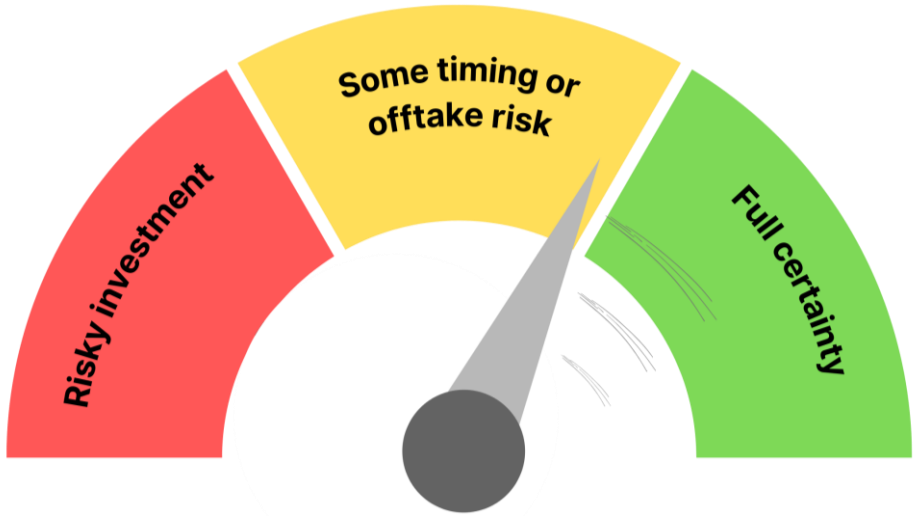
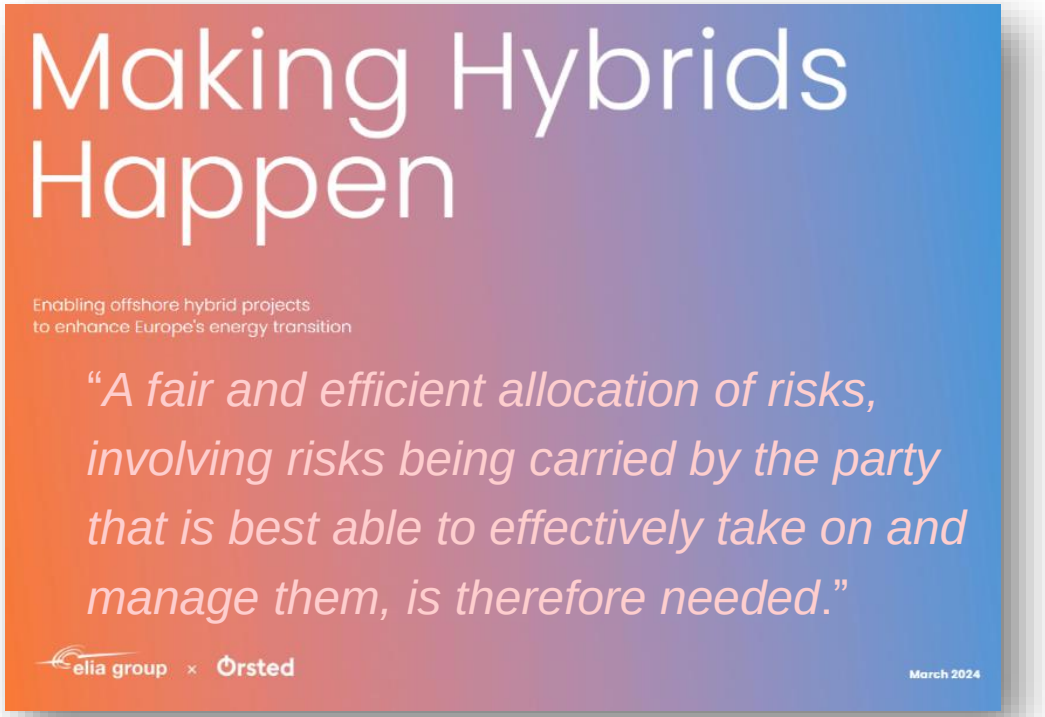
Allocating ‘risk’ is key; yet remains a multifaceted concept with do’s & don’ts

On the one hand, scale & speed may require more risk-taking



The level of demand (un)certainty deemed appropriate determines the investment risk borne by consumers.

Regulators will need to endorse somewhat riskier ‘anticipatory investments’ than in the past because of an accelerated energy transition and because network deployment is often slower than generation deployment.



Source: ACER-CEER: Position on anticipatory investments, March 2024

Source: Making hybrids happen (Elia, Orsted), March 2024

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On the other hand, full ‘de-risking’ may prove ‘risky’

In the past, full de-risking for renewables led to adverse consequences for the electricity system (as well as additional funds needed for support schemes):

- “*Build and forget*”: no incentive to react to (negative) short-term prices
- No incentive for system-friendly design nor system-friendly siting choices

Hence, now is the time to learn lessons from the more recent past.

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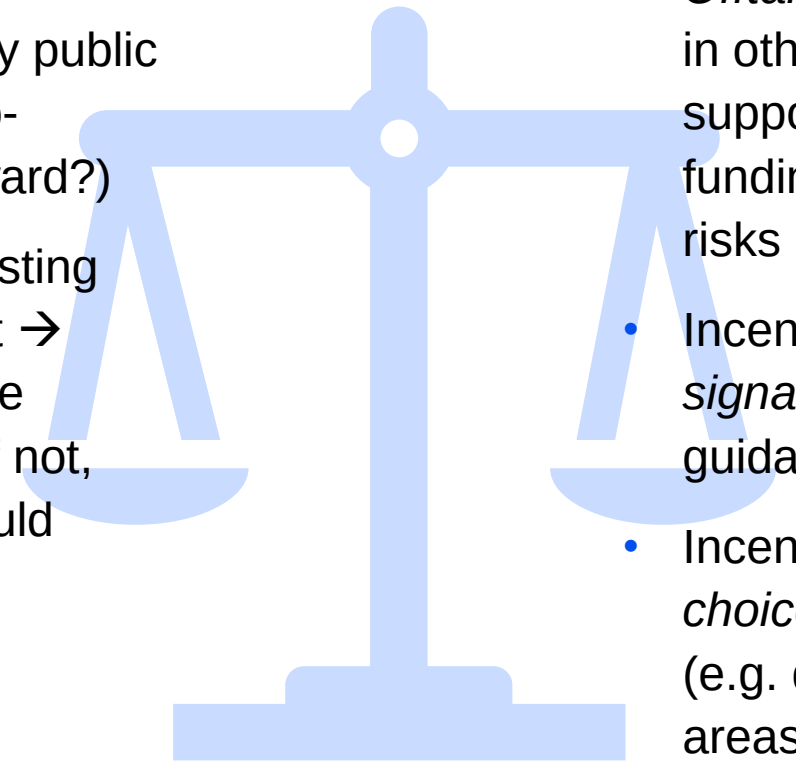
Hence, balancing risks and incentives …

Regulated networks:

- *Investment risk* → subject to regulatory oversight, taken by public authority. Low-to-no risk. (Co-funding regionally going forward?)
- *Availability risk*, i.e. using existing infrastructure to its full extent → TSOs/DSOs should maximise available network capacity. If not, accountability/ penalties should ensue.



Renewable generation:

- *Offtake risk* may be impacted by actions in other Member States → regional support schemes or Member State co-funding renewable tenders (i.e. sharing risks and rewards).
- Incentives to react to *short-term price signals* → 'smart CfDs' (role for EU-level guidance?).
- Incentives for *better design and siting choices* → 'upstream' choices play a role (e.g. designating renewable acceleration areas), thereby inviting more regional coordination on siting.

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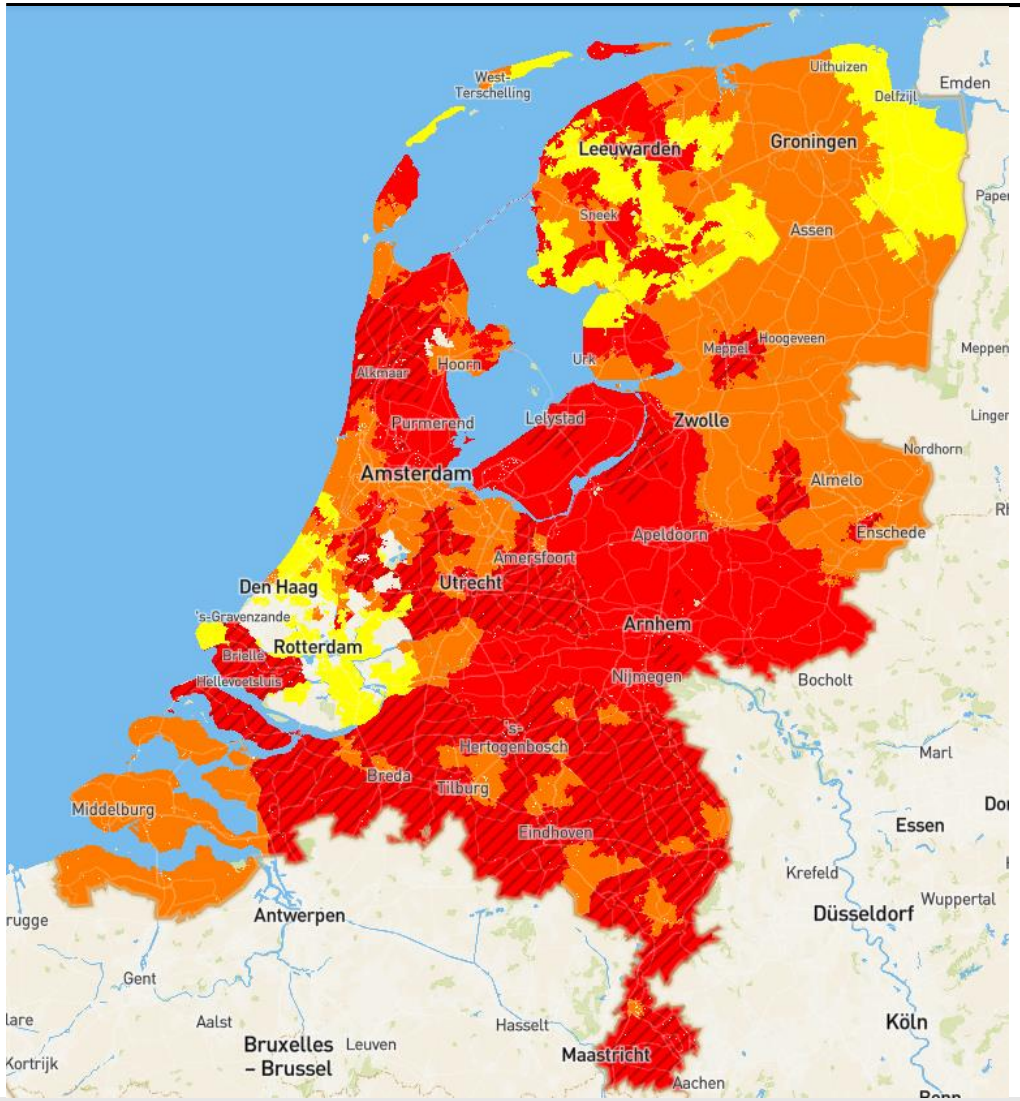
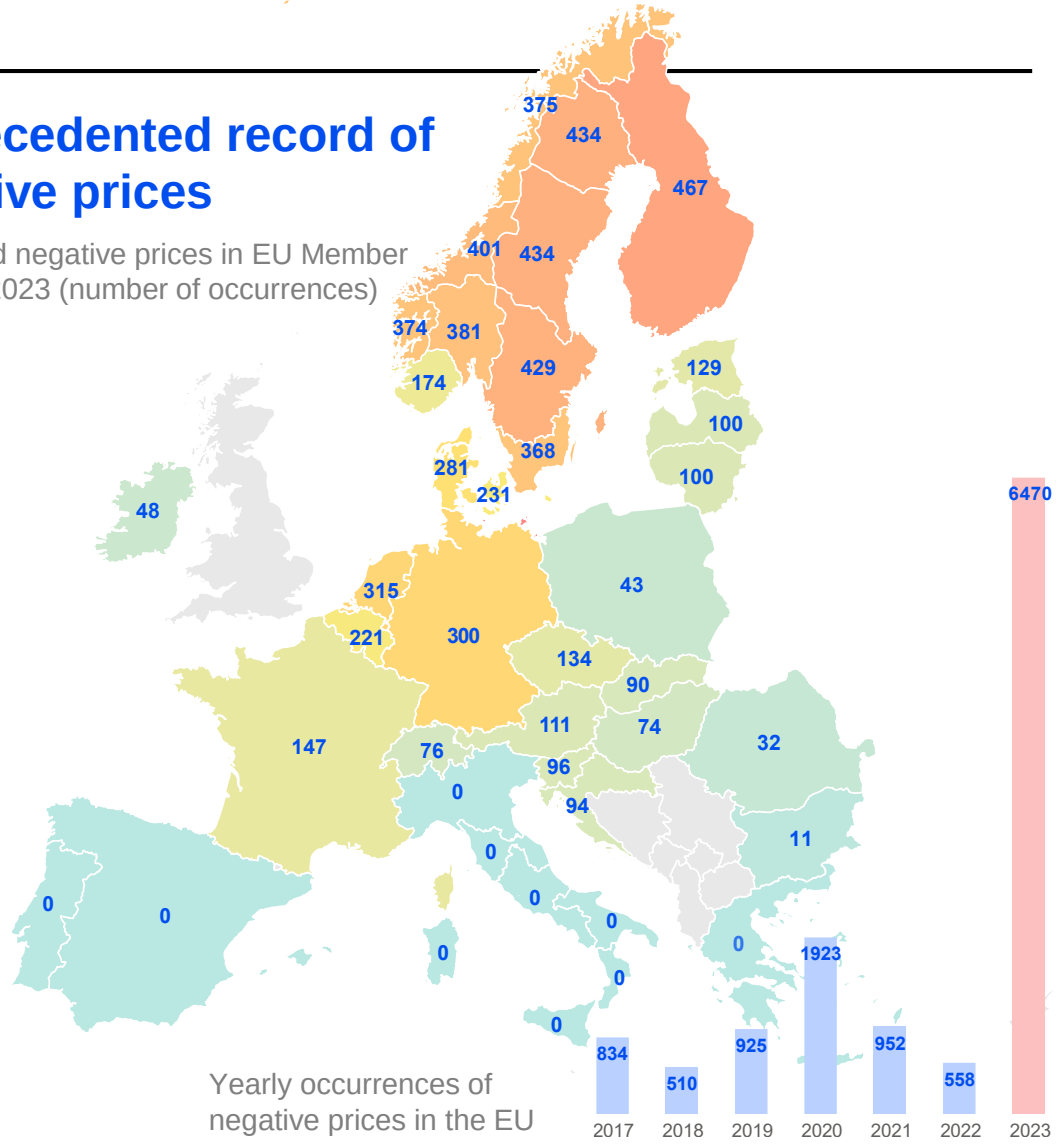
Offshore is part of a broader story; and that story continues onshore …

Offshore is part of a wider story, continuing onshore (1/3)



Unprecedented record of negative prices

Day-ahead negative prices in EU Member States in 2023 (number of occurrences)



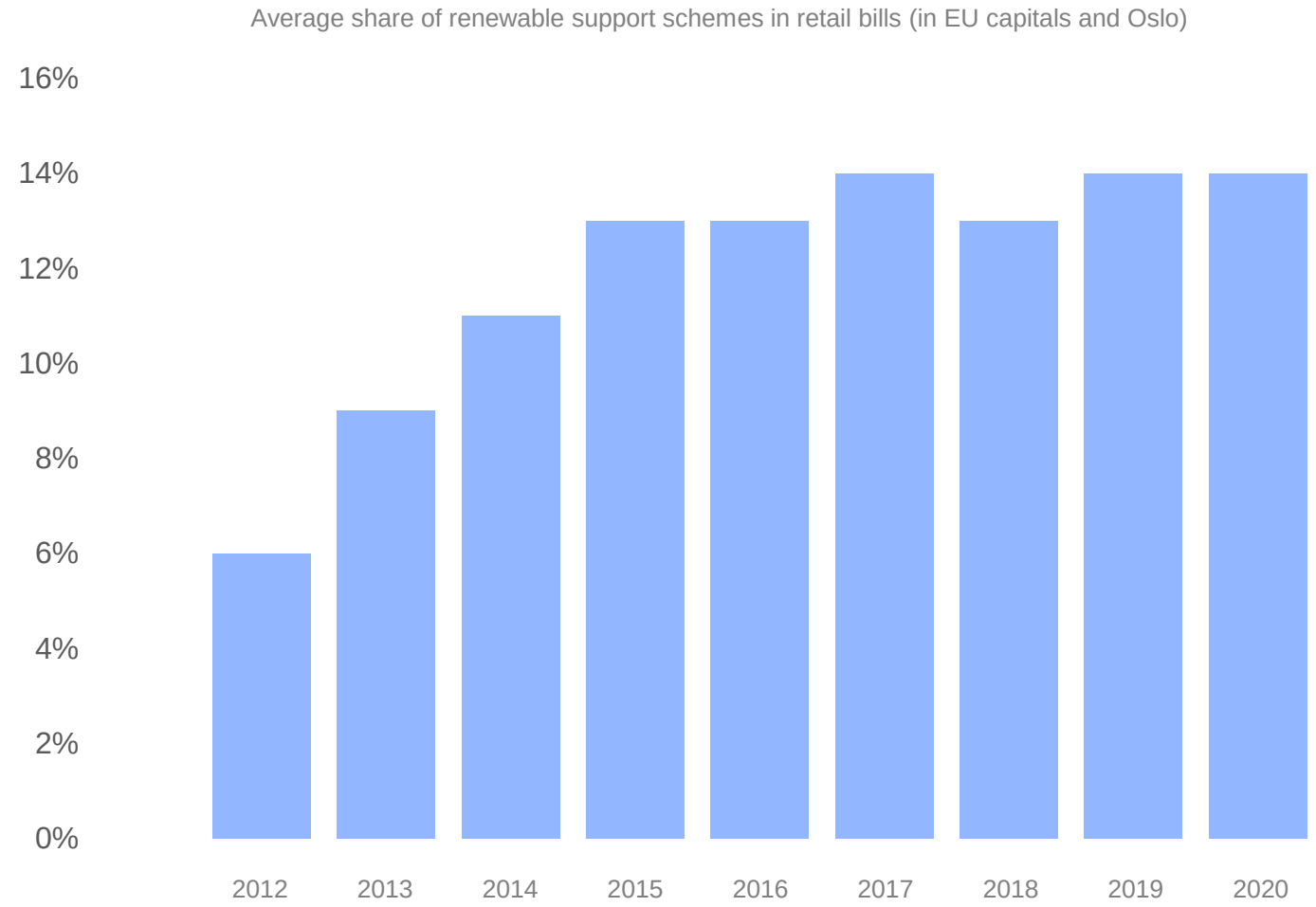
Yearly occurrences of negative prices in the EU

Source: https://capaciteitskaart.netbeheernederland.nl/, April 2024

Source: ACER's report on key developments in the electricity market, March 2024

Offshore is part of a wider story, continuing onshore (2/3)

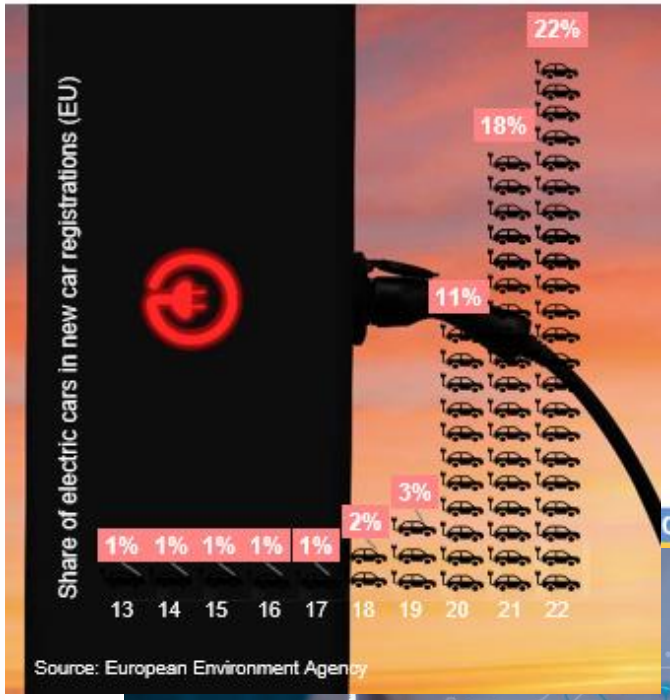
Will network costs sharply increase like renewable support costs in the past?

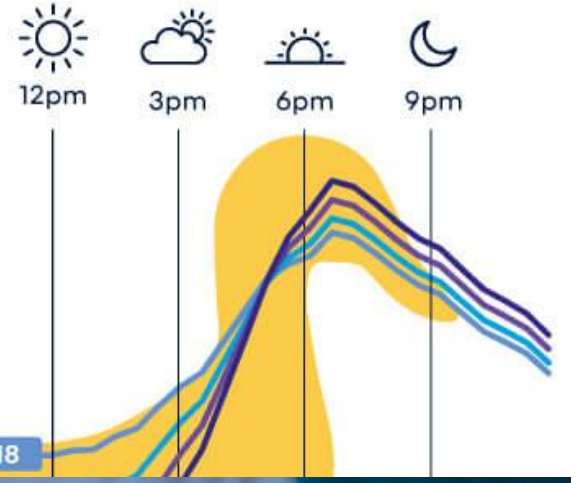


Source: ACER 2020 report on energy retail markets, November 2021

Offshore is part of a wider story, continuing onshore (3/3)

"The average network use is low. How to get it (much) higher?"





Source: Synergy based on AEMO data, 2020

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In the end, presence or absence of trust will likely prove the ‘make-or-break’

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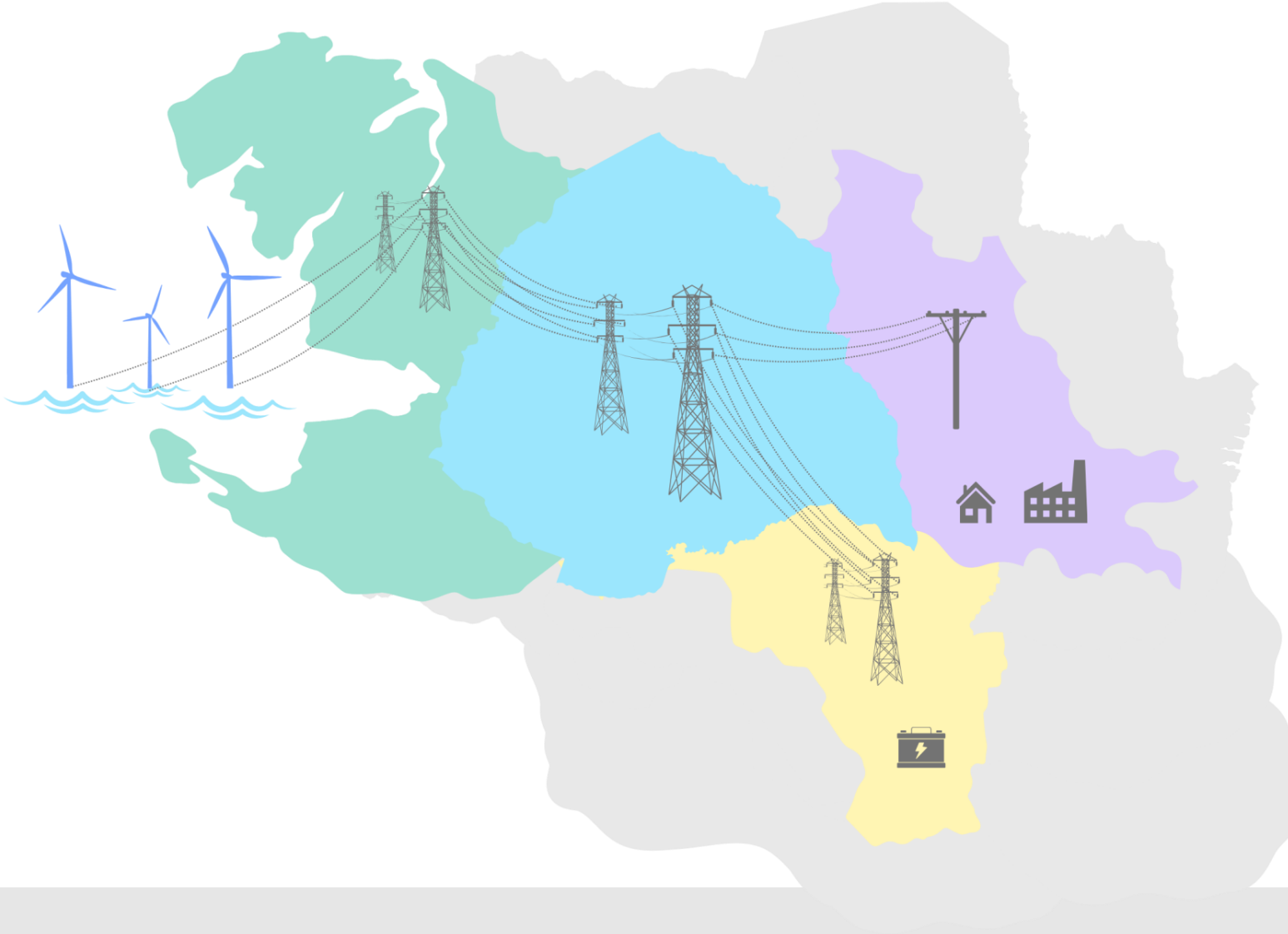
‘Trust but verify’ also holds true for power flows



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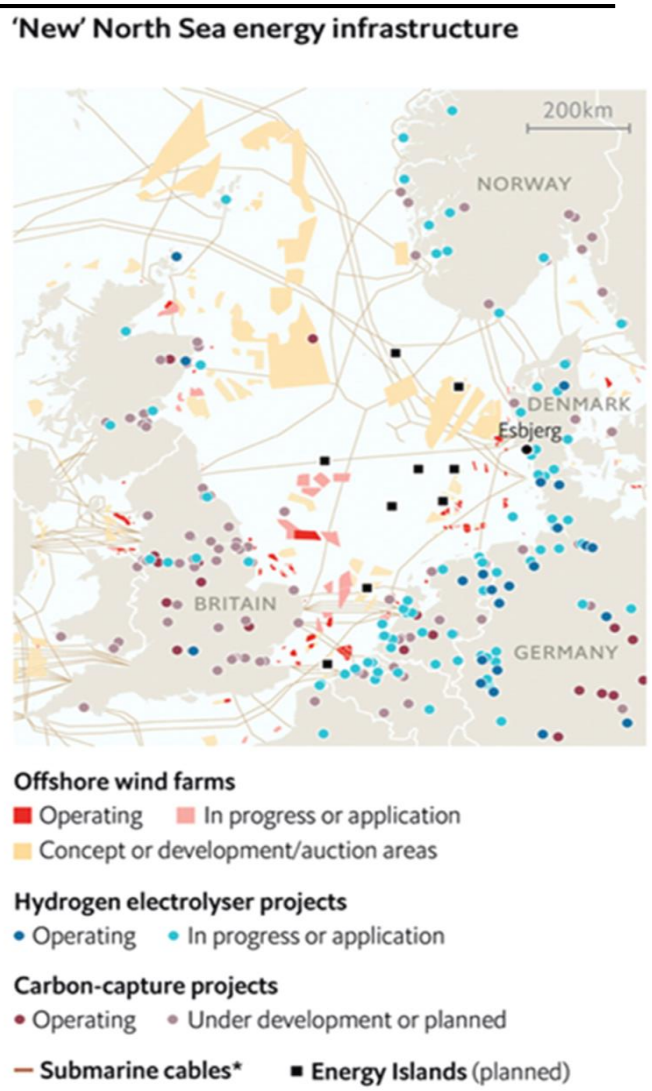
With implications for governance (coordination/planning)

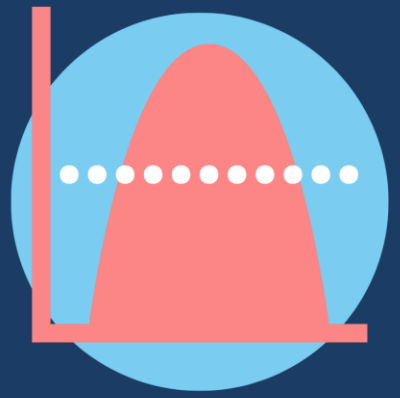


Source: The Economist: "Can the North Sea become Europe's new economic powerhouse?", 1 January 2023.

With implications for availability of cross-border flows

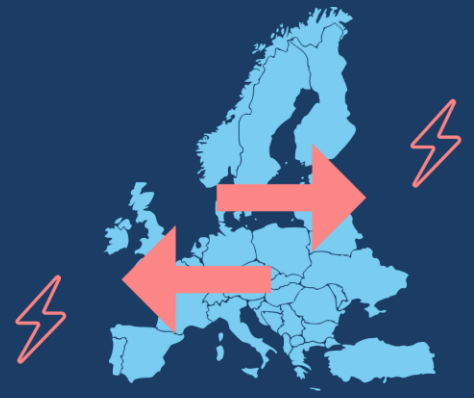
30 – 50%

Currently available capacity for cross-border trade in meshed areas



70 %

Minimum 2026 target for capacity available for cross-border trade



ACER Opinion on the necessary developments for the fulfilment of the minimum cross-zonal capacity requirements …

… stresses the urgency to have maximal available grid to trade electricity.

… points to the necessary steps:

- TSOs to make **optimal and coordinated use of remedies to relieve congestions** in the grid;
- TSOs to undertake **targeted grid developments;**
- TSOs to complete the **bidding zone review** process and Member States/ European Commission to decide.

Source: ACER Opinion on the minimum cross-zonal capacity requirements, April 2024

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With implications for (much more) rigorous enforcement

"… curtailments in cross-border electricity flows or explicit export bans were imposed in a few EU Member States during the January cold spell with the aim of 'protecting domestic consumers' …"

Source: ACER 2016 report on wholesale electricity markets, 6 October 2017

t fragmentation risk is real

Obligation	Legal deadline	(expected) completion	Delay	Enforcement
Single EU day-ahead coupling	June 2018	May 2022	47 Months	No
Single EU intraday coupling	June 2018	November 2022	53 Months	No
15' market time unit in day-ahead market	January 2021	January 2025	48 Months	No
Intraday auctions	January 2023	June 2024	17 Months	No
Flow-based in intraday	August 2023	Mid-2026	38 Months	No
Core Flow-based	February 2022	June 2022	4 Months	No
Nordic Flow-based	Not defined	October 2024	/ (but decision dates from Dec 2019)	No

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Source: Presentation of the European Commission to the electricity cross-border committee, 21 March 2024

Thank you for your attention.
Looking forward to the discussion.

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Annex

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ACER role and governance

- **Supporting the integration of energy markets in the EU** (by common rules at EU level). Primarily directed towards transmission system operators and power exchanges.
- **Contributing to efficient trans-European energy infrastructure**, ensuring alignment with EU priorities.
- Monitoring the well-functioning and transparency of energy markets, **deterring market manipulation and abusive behaviour**.
- Where necessary, **coordinating cross-national regulatory action**.
- Governance: **Regulatory oversight is shared** with national regulators. **Decision-making** within ACER is collaborative and joint (formal decisions requiring 2/3 majority of national regulators). **Decentralised enforcement** at national level.