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European Union Agency for the Cooperation of Energy Regulators

Contain the rise in electricity network costs?

‘*Getting the signals right*’ in network tariffs is key

Grid conference - Council Presidency of Poland

Brussels, 26 March 2025

Christian Zinglersen, ACER Director

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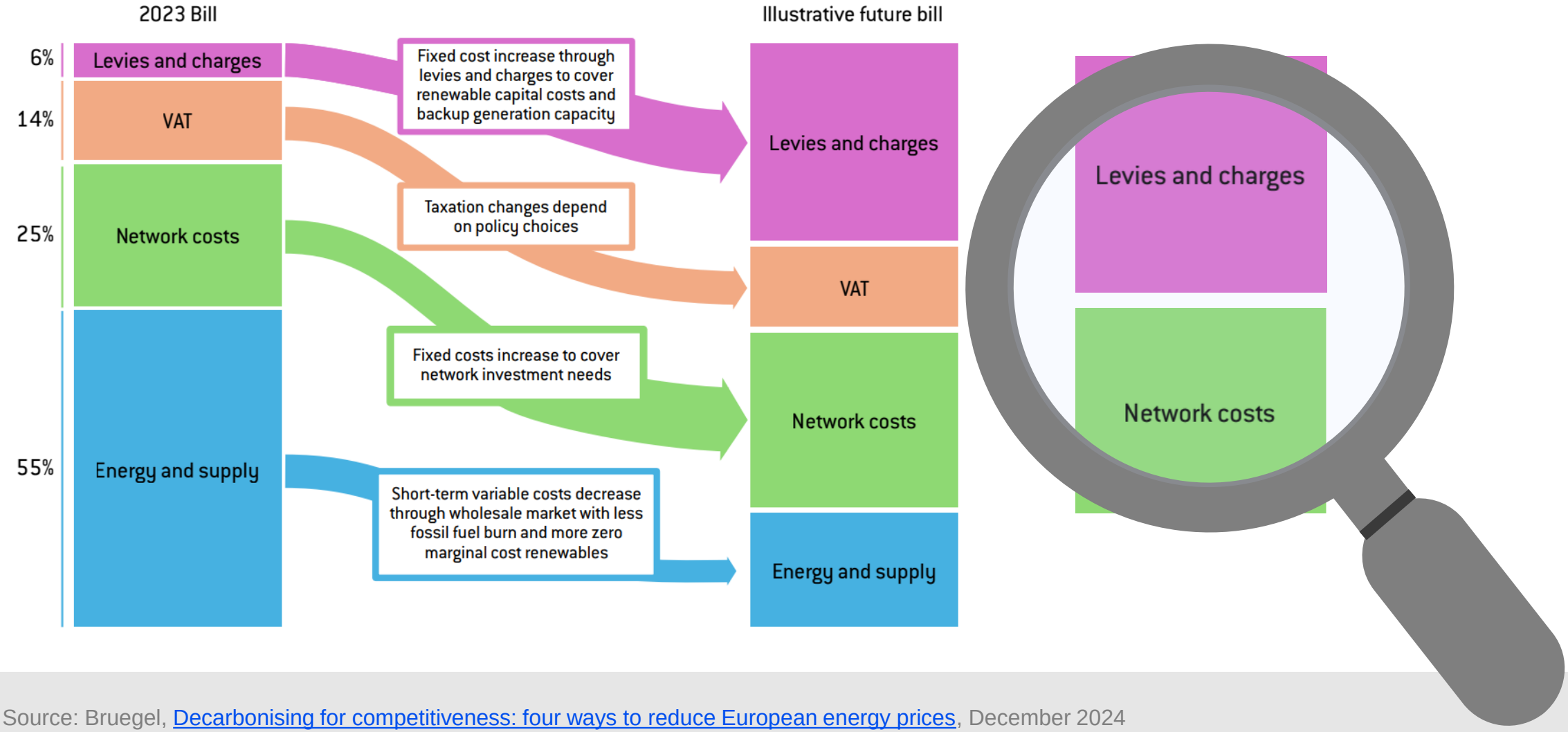
Shift in cost drivers ~ shift in focus?

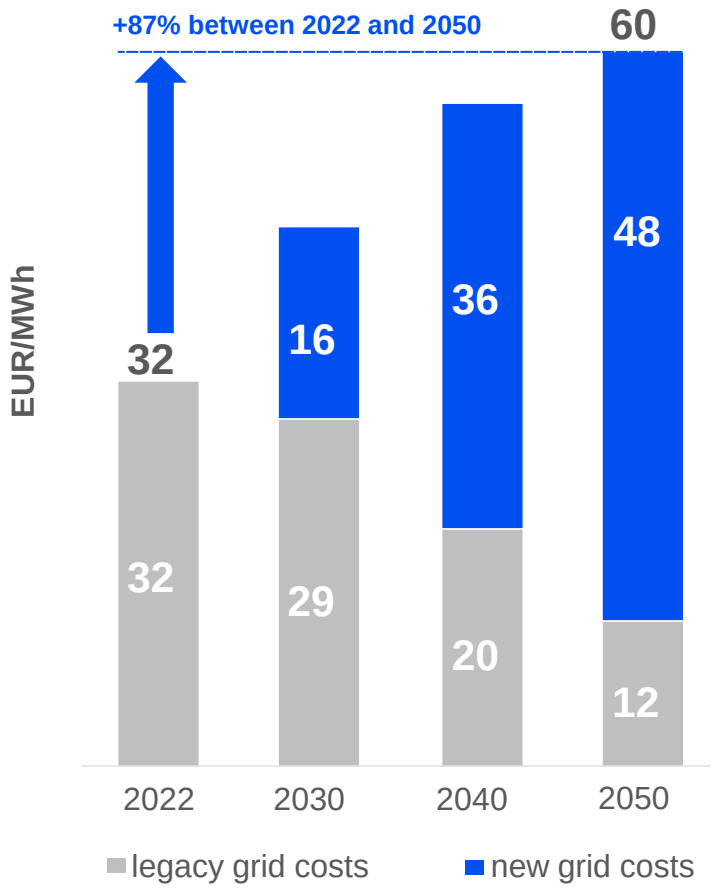
Expected changes in electricity cost components with the energy transition



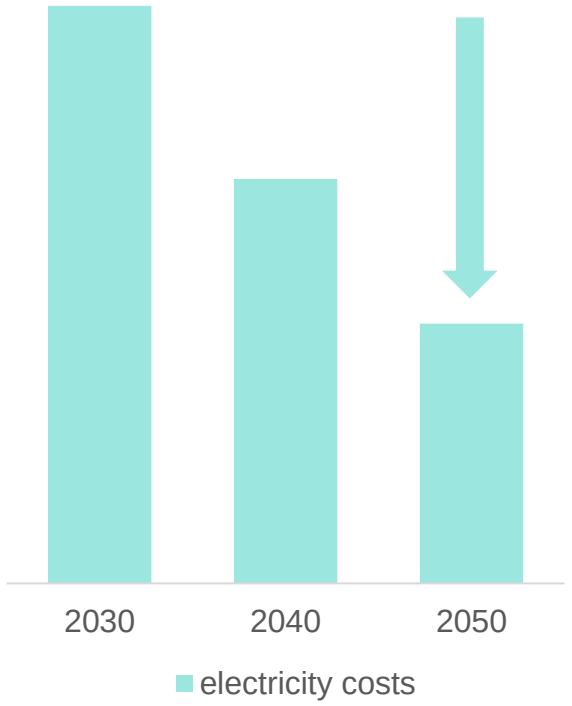
Source: Bruegel, Decarbonising for competitiveness: four ways to reduce European energy prices, December 2024

Network costs at risk of doubling by 2050

Grid costs are expected to increase …



… while electricity costs should decrease



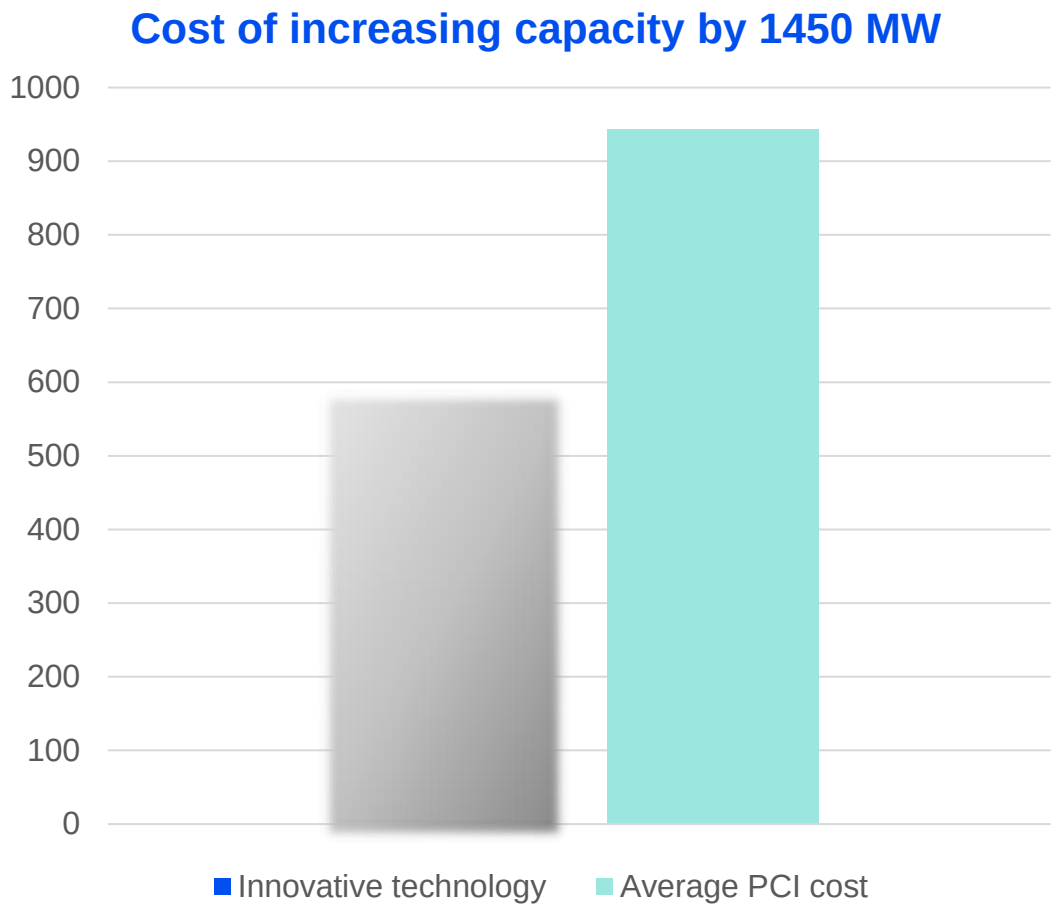
Innovative grid technologies can help:

20-40 % increase in overall network capacity by 2040

35 % reduction in conventional expansion costs by 2040

Source: ACER's monitoring of electricity infrastructure development to support a competitive and sustainable energy system, 16 December 2024. Numbers (right) from CurrENT and Compass Lexecon: Prospects for Innovative Power Grid Technologies, June 2024

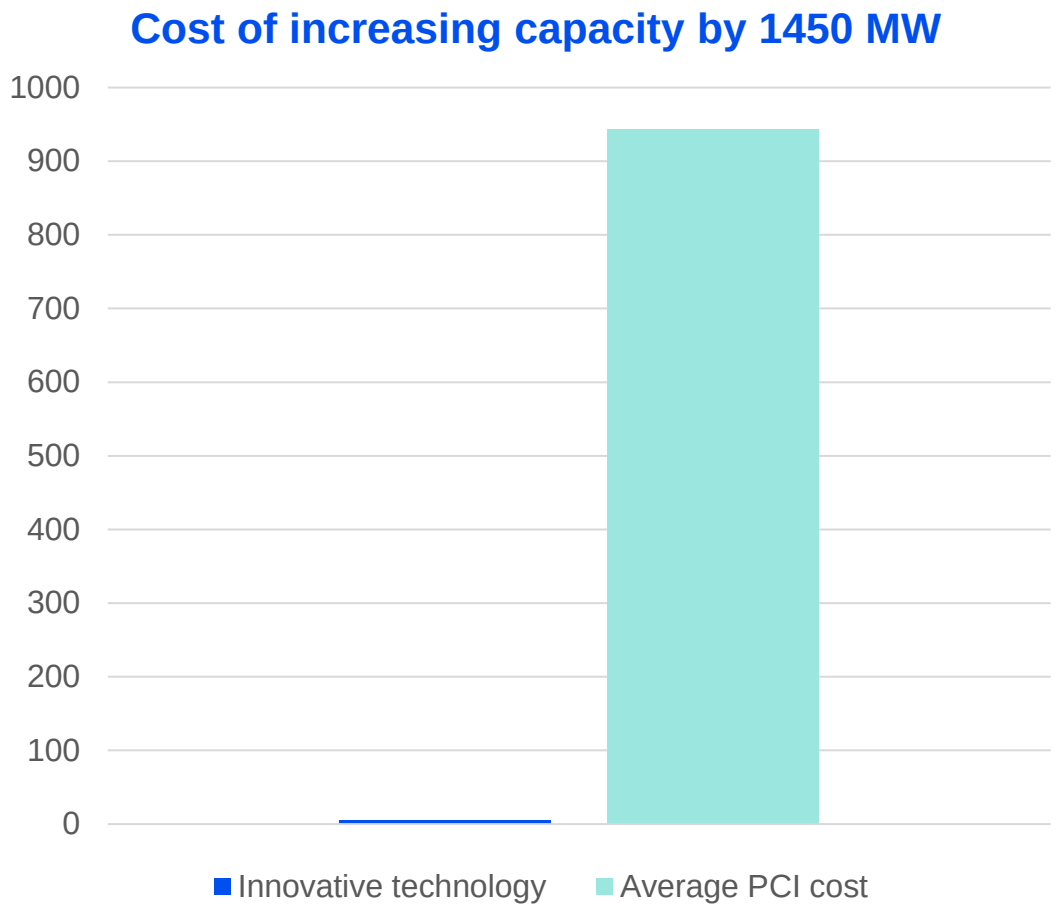
Innovative solutions deliver benefits



Case study: Arera (Italy's energy regulatory authority) incentivises innovative solutions to increase grid capacity, making for …

Source: Arera and ACER calculations based on the 2021 PCI list

Innovative solutions deliver benefits



Case study: Arera (Italy's energy regulatory authority) incentivises innovative solutions to increase grid capacity, making for …

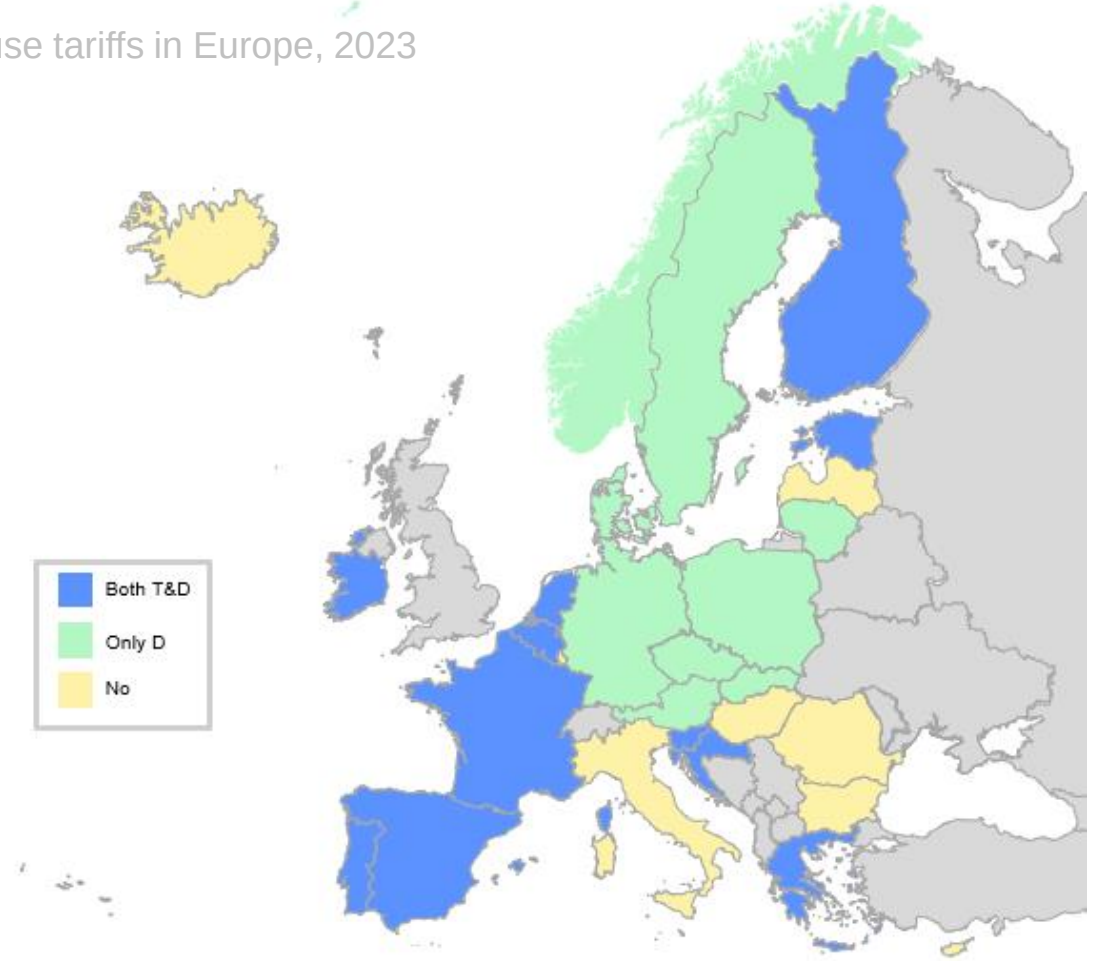
- Innovative technology cost ~ € 5 M for 1450 MW
- Same result by building new lines ~ approx. € 950 M
- Making for ~ 190-fold difference

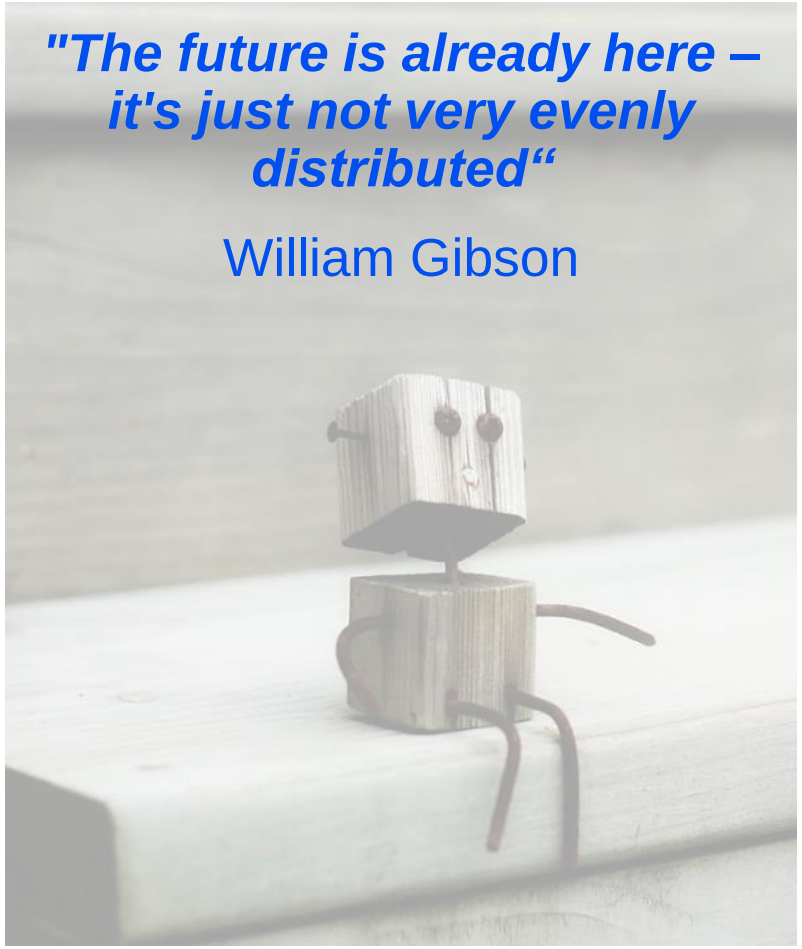
Source: Arera and ACER calculations based on the 2021 PCI list

Grid tariffs play a role, too

Flexibility needs make flat grid tariffs costly, pushing Time of Use forward

Time of use tariffs in Europe, 2023



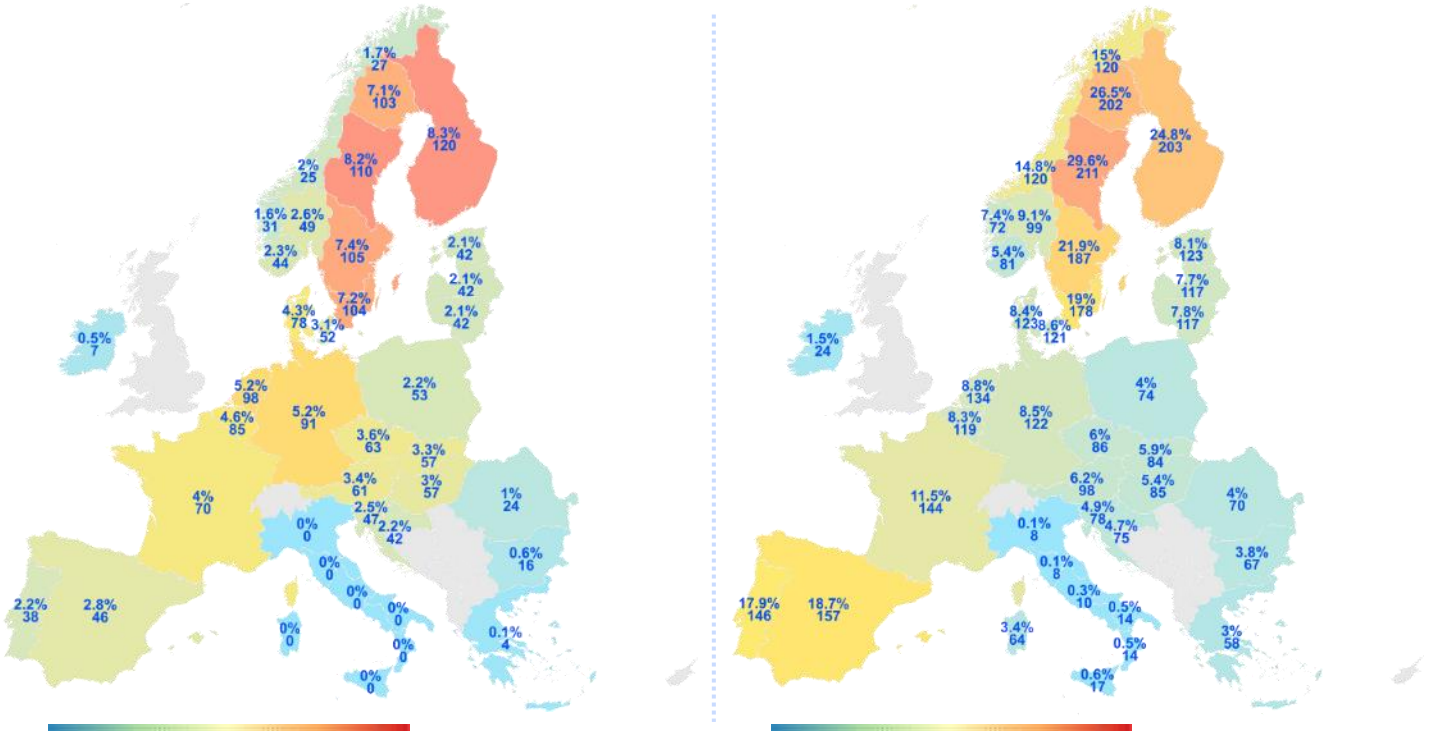


Source: ACER's report on network tariff practices: "Getting the signals right: electricity network tariff methodologies in Europe', March 2025

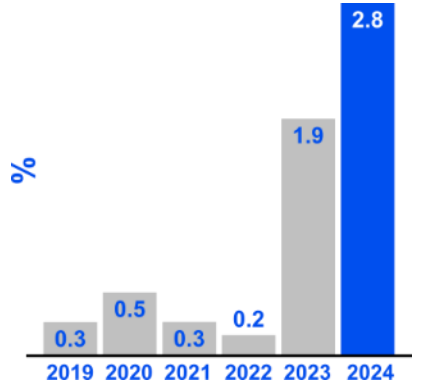
A new era: Increase in negative & low electricity prices

Surge in negative and very low electricity prices across the EU in 2023 intensifies further in 2024.

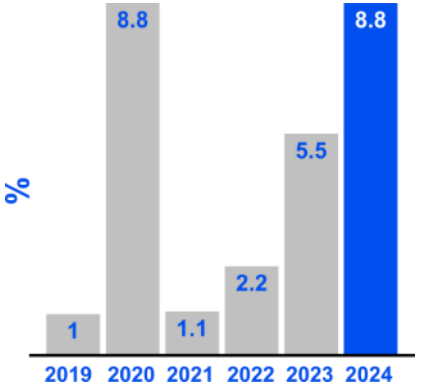
Percentage of the time and number of days when prices were negative (left) and below 5€/MWh (right), EU-27/EEA(Norway), 2024



Annual percentage of the time when prices were negative, EU-27/EEA (Norway), 2019-2024 (%)



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



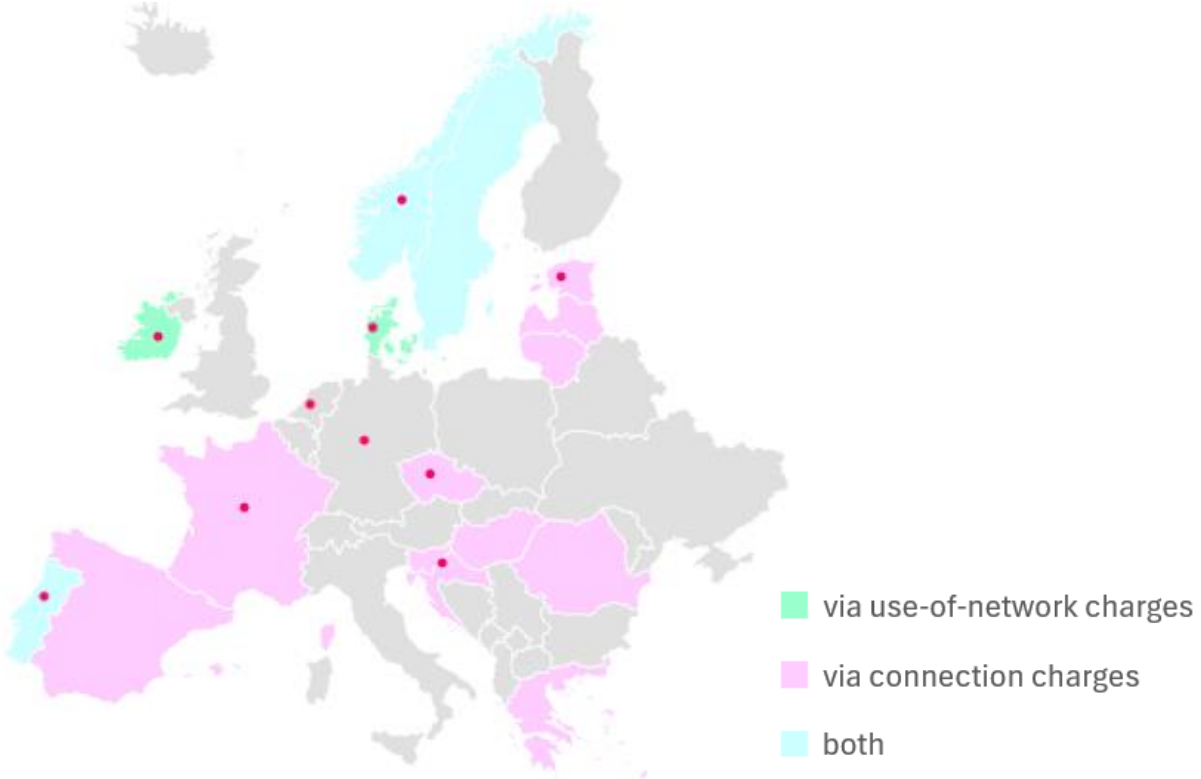
Occurrences of negative prices had risen by 12 times in 2023; they increased further by half in 2024.
Better subsidy designs and overall tariffs reflecting local constraints could encourage renewable producers to align output with system needs, reducing negative price episodes.

Source: ACER calculations based on ENTSO-E Transparency Platform. ACER's report on key developments in European electricity and gas markets, March 2025

Consider locational signals

Locational signals reflecting actual network usage and flexible connection agreements can mitigate some of the need for new network investments

Locational signals in transmission



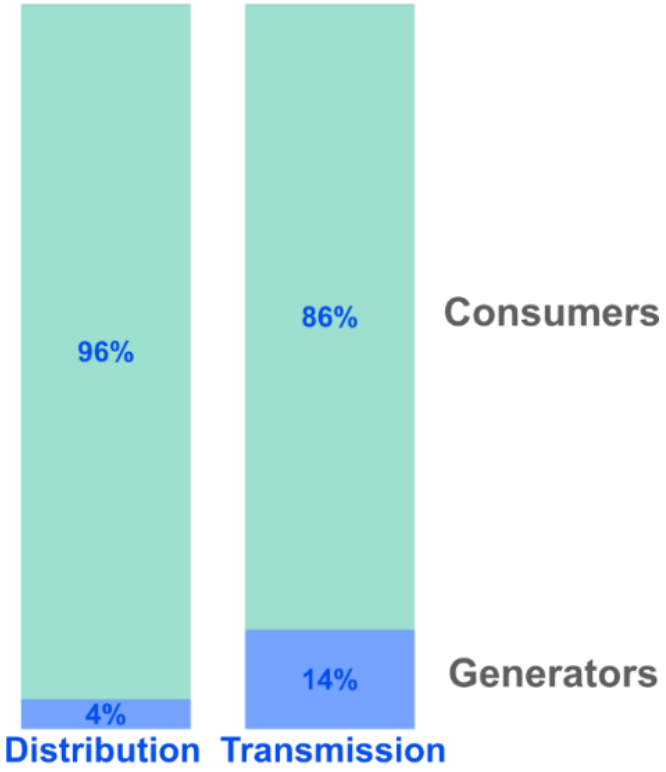
Locational signals in distribution

(·) red dots mean flexible connection agreements

Source: ACER's report on network tariff practices: "Getting the signals right: electricity network tariff methodologies in Europe', March 2025

The ‘who pays’ question (for network costs)?

Split of network charges between generators and consumers

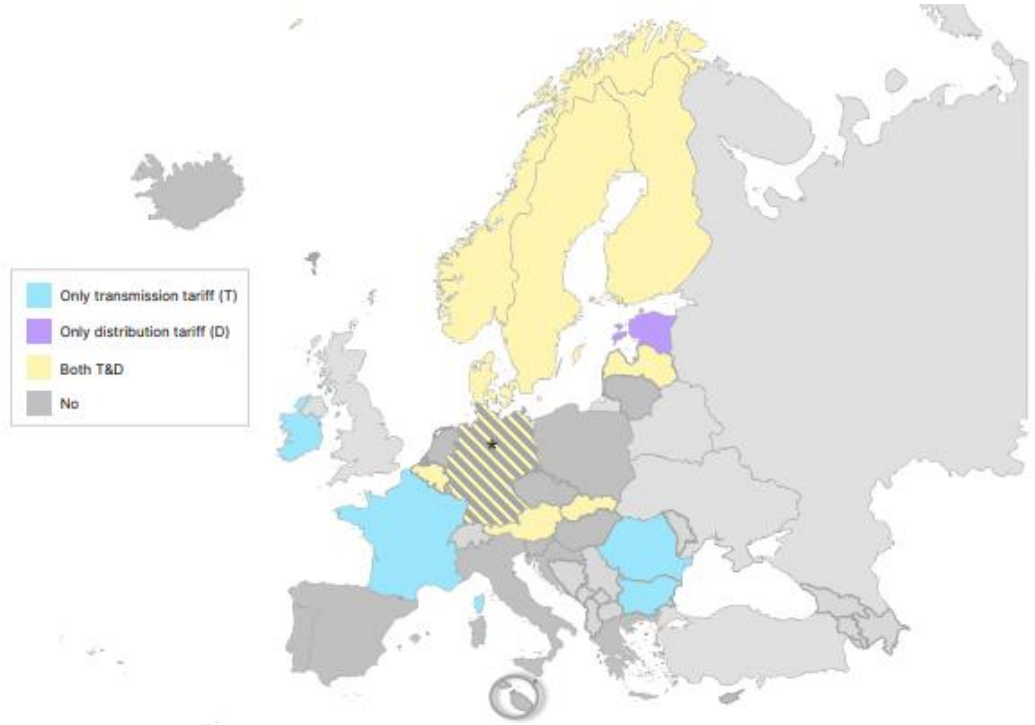


Expanding the grid for production?

Producers may need to pay more.

Network cost burden on generation varies: Room for alignment of practices to ensure a level playing field across Member States

Application of injection charges in Europe

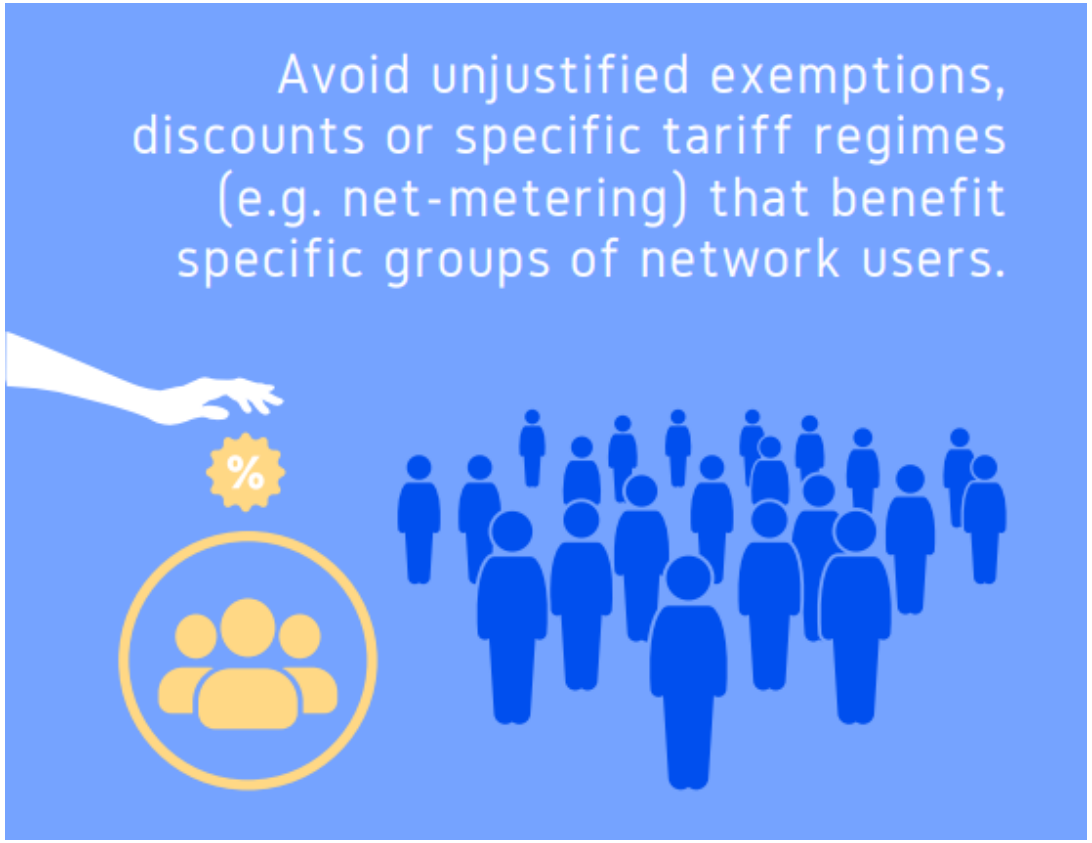


(*) Germany applies negative injection charges

Source: ACER’s report on network tariff practices: “Getting the signals right: electricity network tariff methodologies in Europe’, March 2025

What might be at stake in terms of tariff discounts?

Discounts to be justified by underlying costs



Specific tariff regimes shielding some network users (e.g. discounts to large consumers, net-metering for renewables) may risk increasing overall network costs (per lack of incentive to adjust behaviour).

The risk of network tariff 'races to the bottom' amongst Member States: Are we '*in it together*' … or not so much?

Source: ACER's report on network tariff practices: "Getting the signals right: electricity network tariff methodologies in Europe', March 2025

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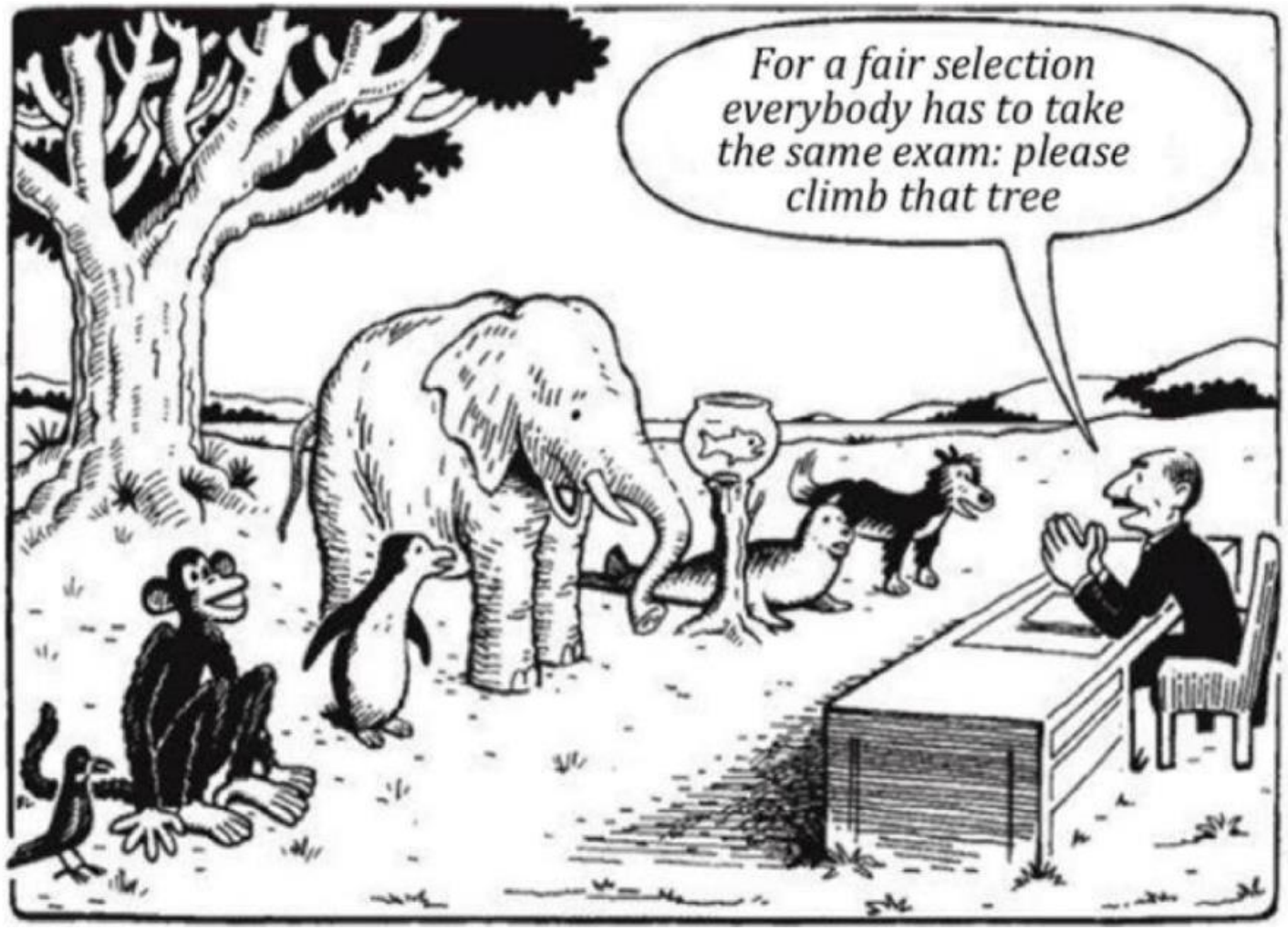
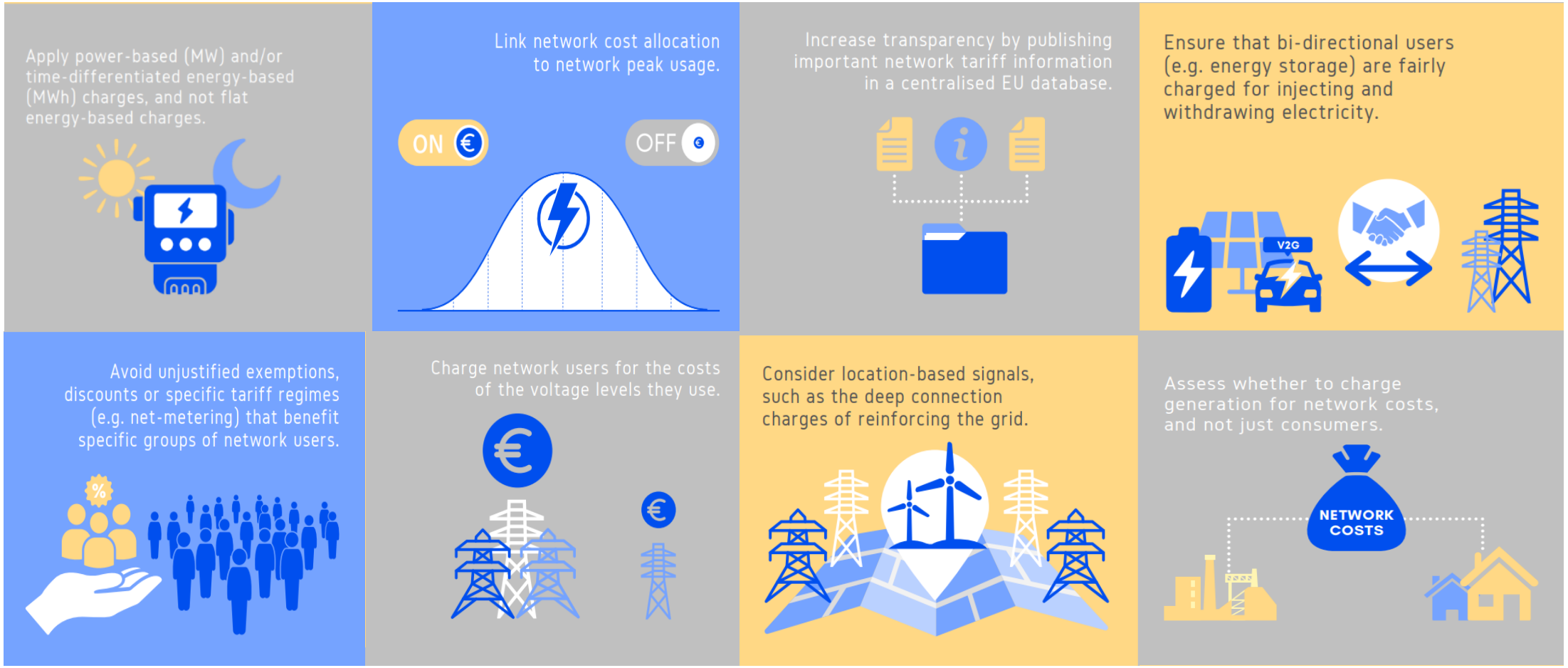
Common principles vs. full harmonisation?



We opt for principles ~ applied per local context



Source: ACER's report on network tariff practices: "Getting the signals right: electricity network tariff methodologies in Europe', March 2025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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 energy markets to ensure that they function well, **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.
- Headquartered in Ljubljana, Slovenia. **Engaged across the EU**.

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Stay tuned for more …

	Informing policy considerations	Monitoring
ELECTRICITY	• Recommendations: Demand response rules; improving the monitoring, investigation and enforcement framework (December) • Implementation of 15 min market time unit trading in EU-wide day-ahead and intraday markets (June) • Assessment of peak shaving products in normal conditions (June) • Opinion on the bidding zone review study (July) • Policy Paper on infrastructure cost benefit sharing (December)	• No-regret measures to remove barriers to demand response (April) • Network codes implementation delays (ad-hoc updates) • Market integration and cross-zonal capacity report (July) • Regional coordination centres report (March) • Balkan black-out investigation
GAS, HYDROGEN AND RETAIL	• Recommendation on intertemporal cost allocation (July) • Network codes 2.0 (CAM and CMP guidelines amendments) • LNG methodology update	• Gas monitoring quarterly • LNG (May) • Capacity/congestion (June) • Hydrogen market (October) • Retail gas country sheets (July)
ENERGY SYSTEM NEEDS	• Adoption of the flexibility needs methodology (July) • Guidance on Distribution Network development plans (July)	• Implementation of the ITC mechanism (March) • Best practices network tariffs report (March) • PCI monitoring (April) • Security of supply report (November)