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European Union Agency for the Cooperation of Energy Regulators

Engaging European consumers for a cost-effective clean energy transition

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A broad & evolving Internal Energy Market

- Energy transition at scale & speed: '*All hands on deck*' (when & where efficient).
- Sound principles still hold true:
  - Cost-efficient & effective.
  - Open to innovation (technology & business wise).
  - Avoiding incumbent bias.
- Markets a key driver. Regulation a key enabler.
- Building on an evolving Internal Energy Market.

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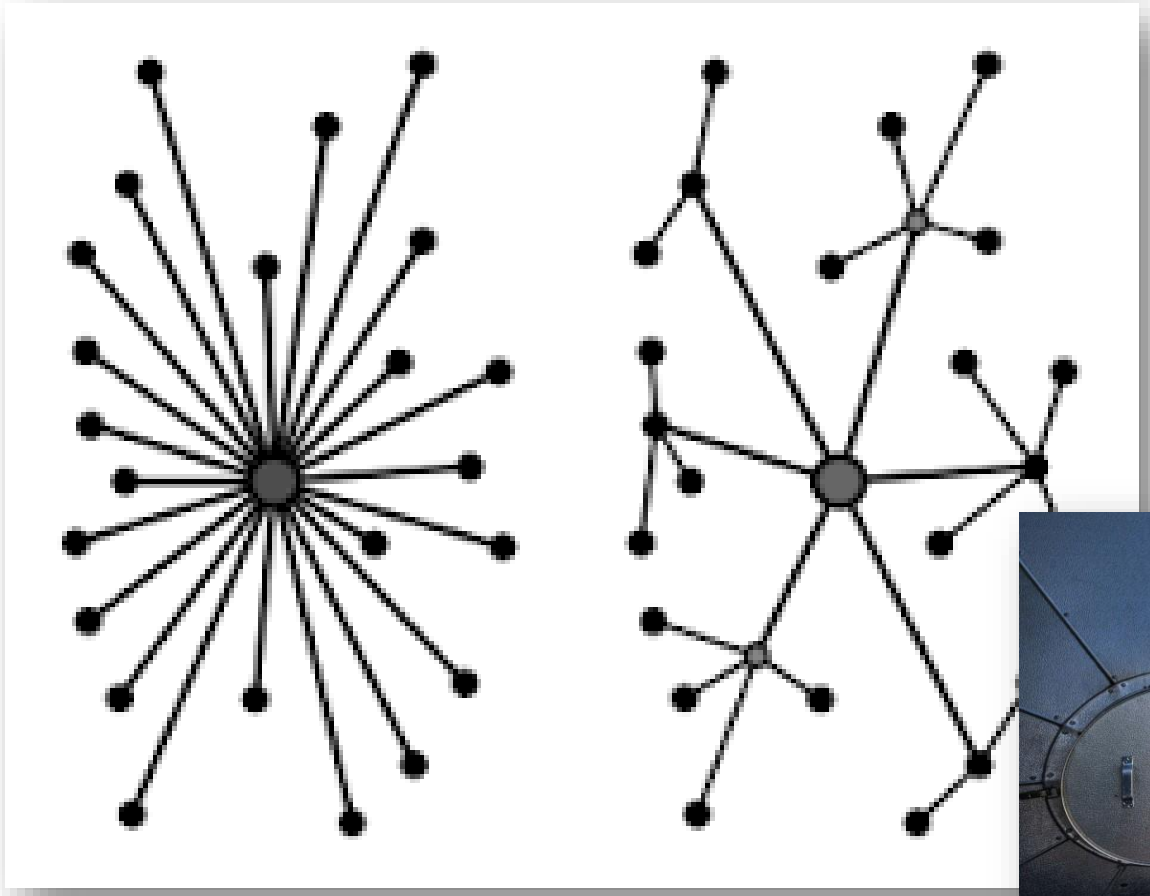
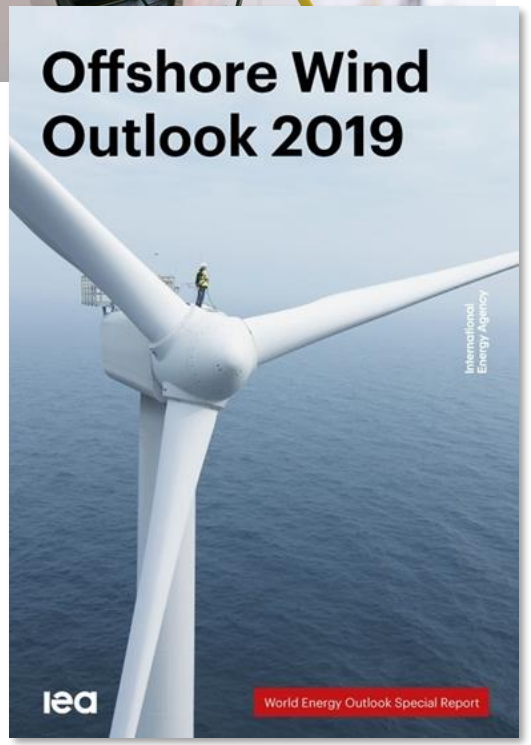
Starting with three perspectives (1)





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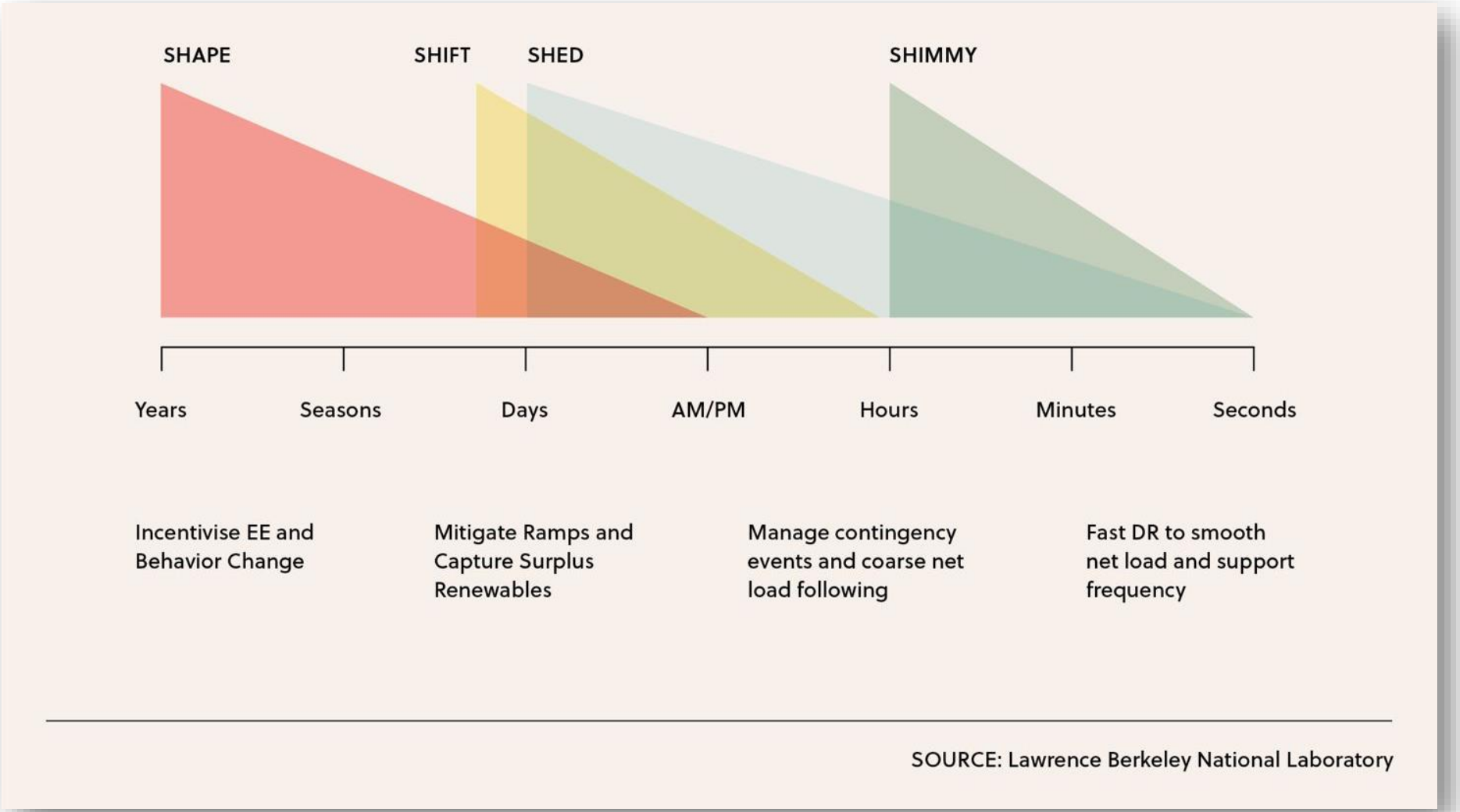
Starting with three perspectives (2)



Note: Zsuzsanna Pató of the Regulatory Assistance Project in *Foresight*, December 2020. LINK.

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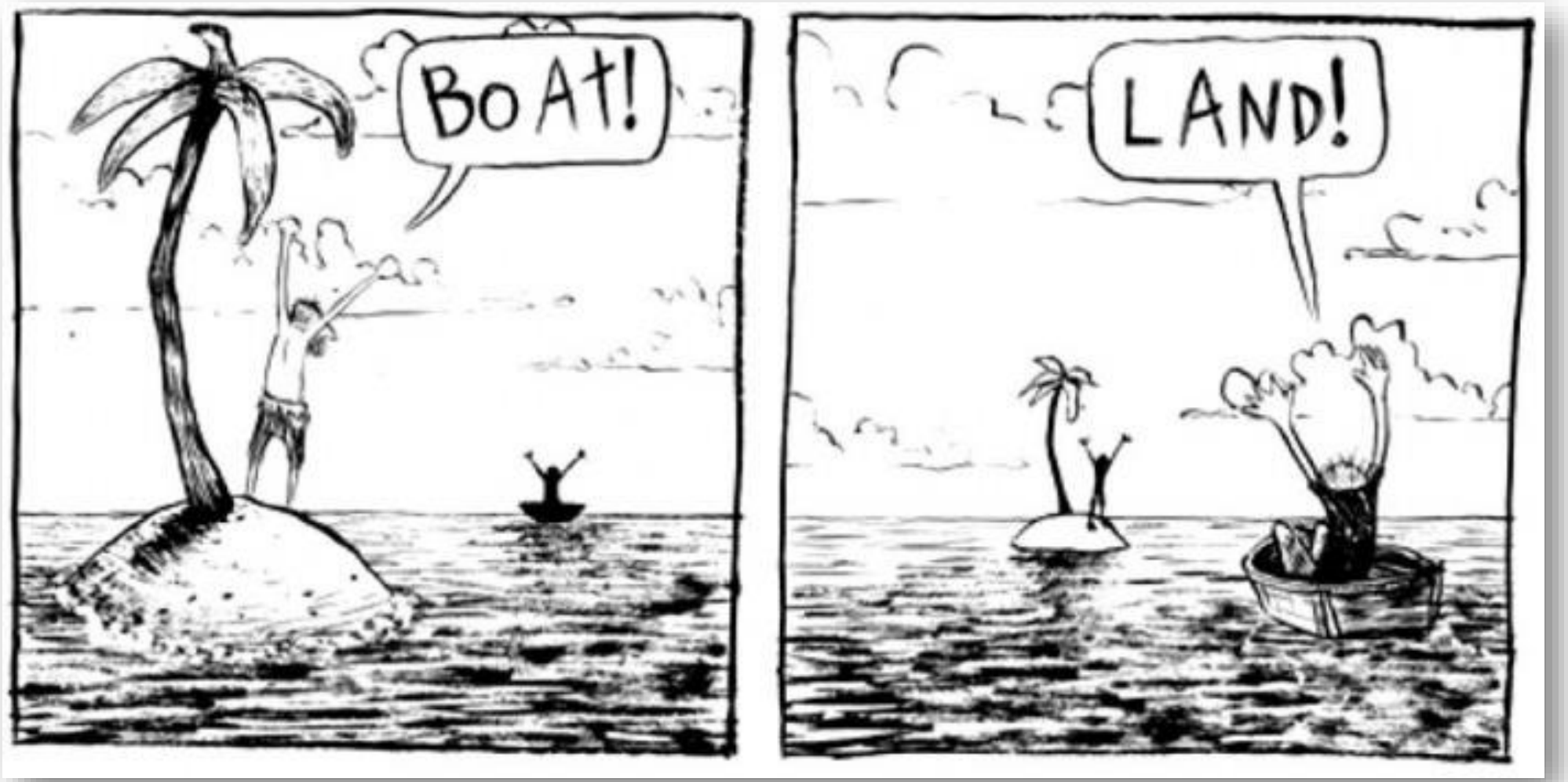
Starting with three perspectives (3)



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In summary …

- The relative role of centralised versus decentralised assets. Bulk power vs. local balancing?
- Energy system stability (security) in an era of rapid change. Who may (should) be '*coming to the rescue*'?
- Different perspectives and entry points play a role. Who's problem is being solved?

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Opportunity outweighing challenge

Table 3 Electricity system trends and their potential impacts on various aspects of electricity security

Trend	Flexibility	Fuel security	Adequacy	Climate resilience	Cyber resilience	Simultaneous contingencies
Higher shares of variable renewables	●	●	•	◐	•	◐
Smaller fossil-fired fleets	●	•	●	◐	•	•
Declining shares of dispatchable low-carbon (nuclear/hydro)	●	●	●	◐	•	◐
Decentralisation (e.g. distributed generation, battery storage)	•	•	◐	●	◐	•
Digitalisation (e.g. connectivity, automation)	●	•	●	●	◐	●

Impact on security
- ● = increased
- ● = decreased
- ● = neutral
- ◐ = uncertain or depends on implementation

Relative importance
- • = low
- ● = medium
- ● = high

Note: IEA, *Power Systems in Transition. Challenges and opportunities ahead for electricity security*, October 2020. LINK.

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Clean Energy Package: A significant step forward

Clean energy for all Europeans

Facilitates start-up & operation

(smart meter, real-time data)

Optimises economic potential

(network charges not to discourage DSR, marginal price based balancing settlement)

Facilitates market access

(access to aggregators, dynamic pricing contracts, equal access for all to trade flexibility)

Optimises options for market participation

(products definition in all electricity markets)

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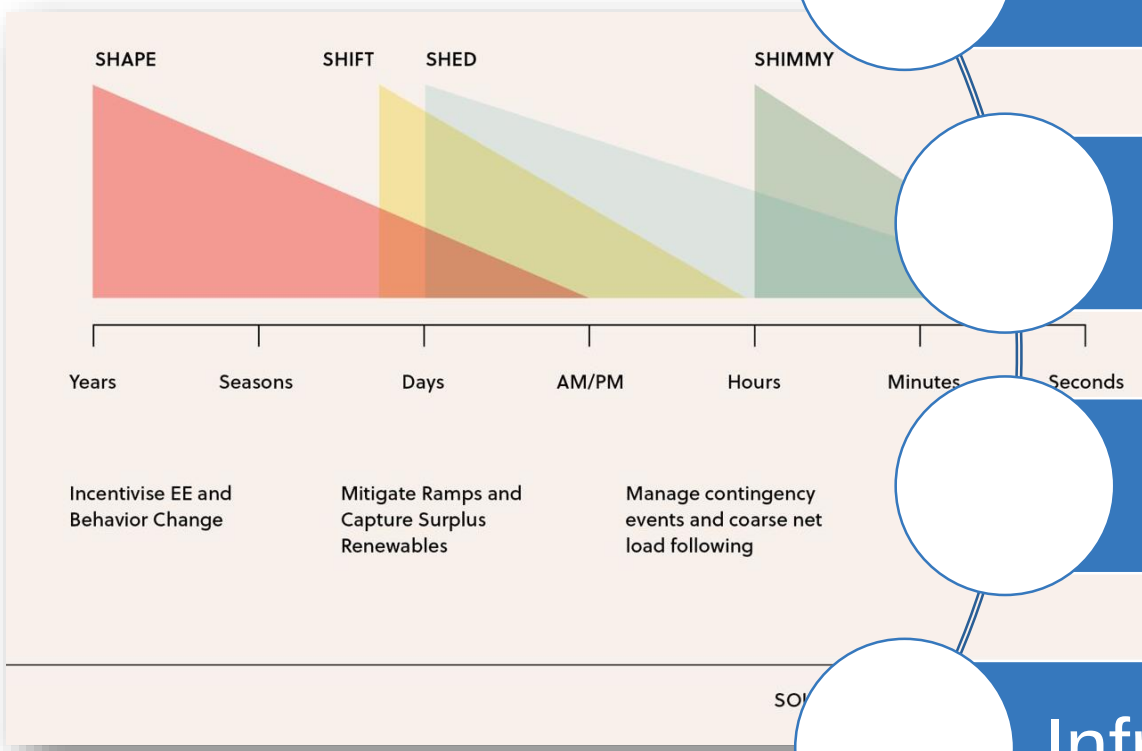
ACER focus is (at least) four-fold



- Resource adequacy
- Monitoring barriers to entry
- Network Codes (new or amended)
- Infrastructure incentives and tariff-setting

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Demand Side Response & resource adequacy

Resource adequacy assesses the level of (electricity) security of supply in the long term: Does Europe / its Member States have enough generation, storage, network to supply demand from now until 2030?

A European approach

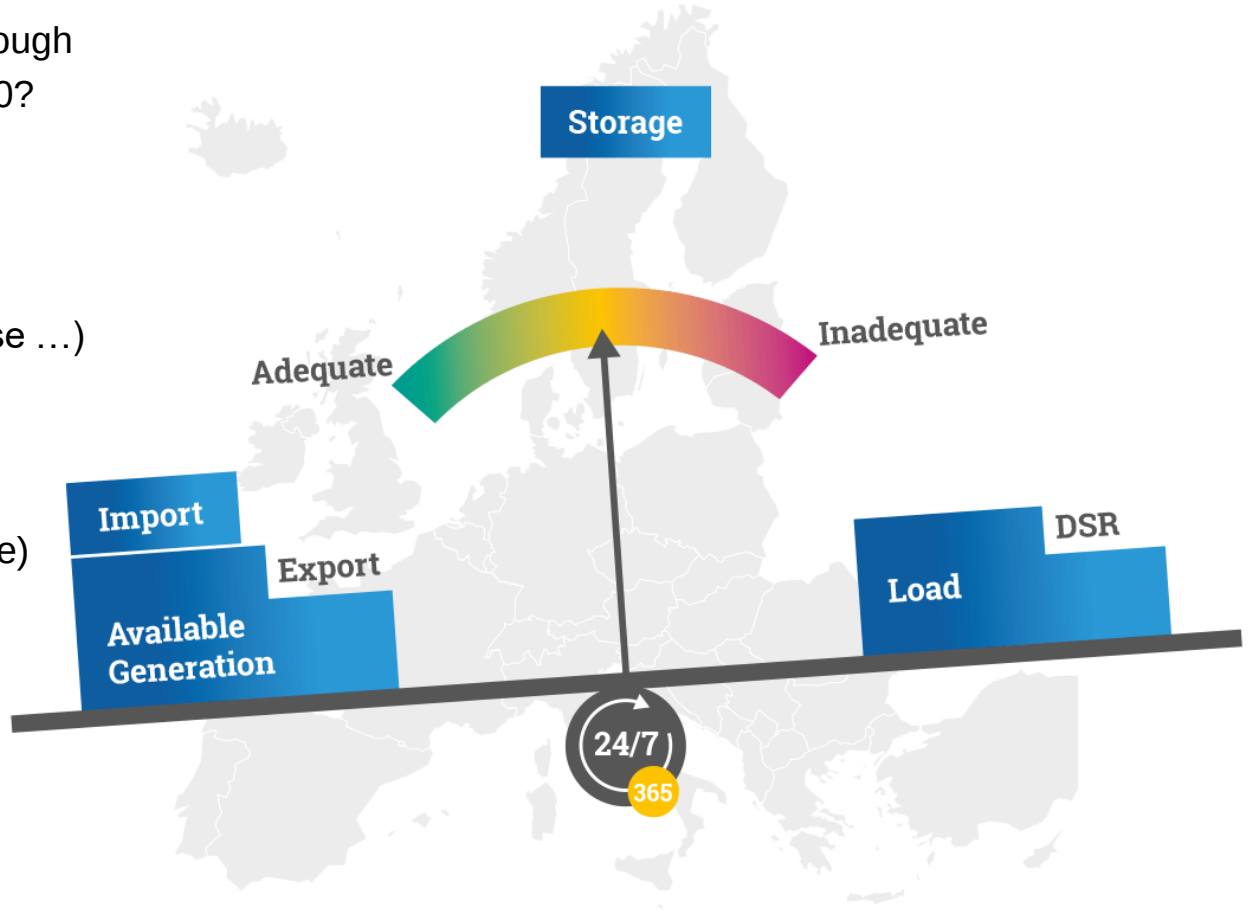
- Highlights the benefits of mutual interdependence
- Paves the way for new technologies (storage, demand-response …)

Resource adequacy studies may highlight the benefits of DSR regarding

- Reduced need for investment (in network, generation or storage)
- Increased resilience to extreme events

Modelling needs to take different contributions into account

- All solutions placed on a ‘level playing field’
- Forecasting needs to be robust. Transparency & scrutiny.



Note: Figure is taken from ENTSO-E

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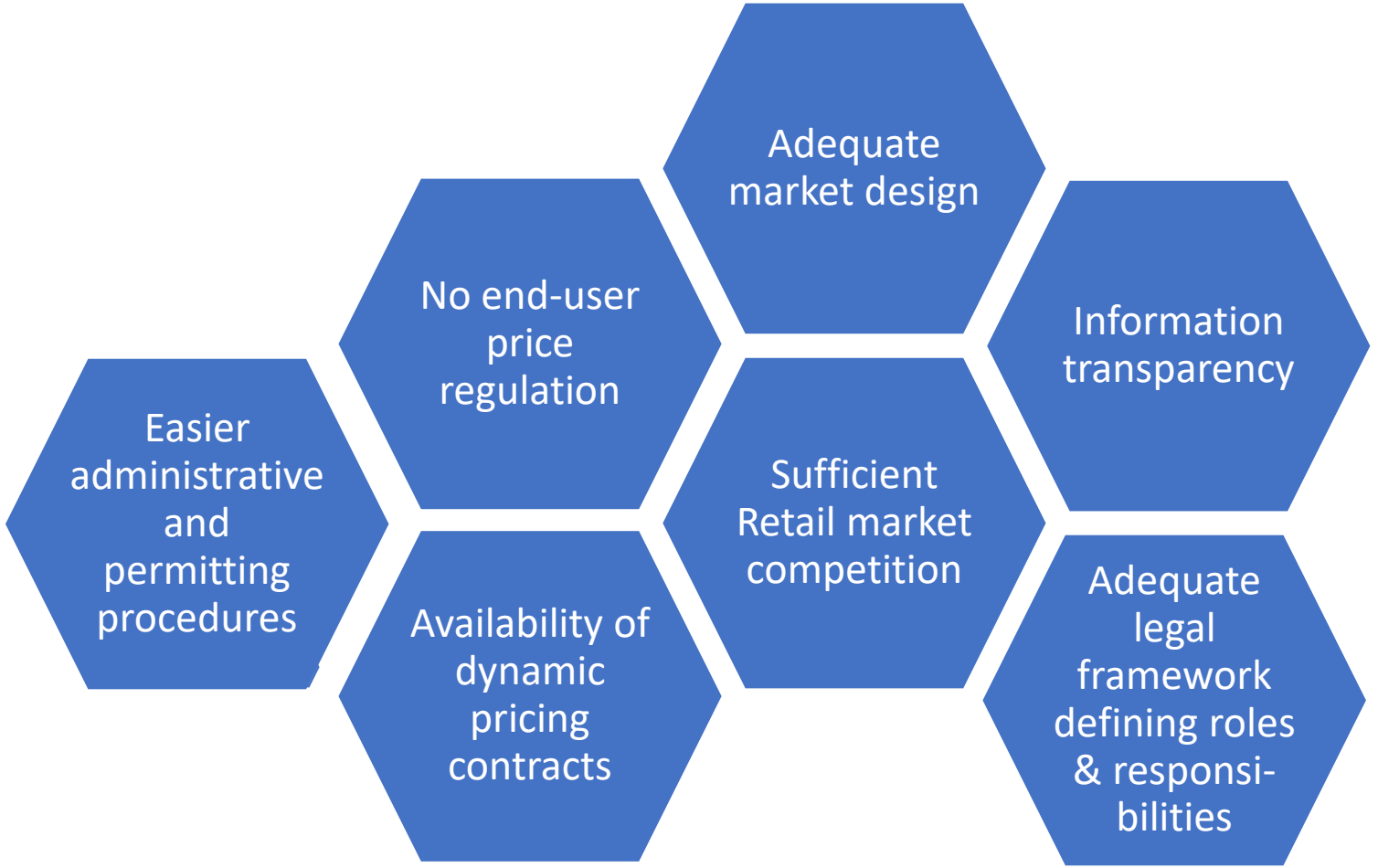
Monitoring barriers to entry



We aim to:

- Monitor and assess barriers to easy market entry and participation for new entrants and small players (including DSR and aggregators)
- Measure such barriers through indicators
- Assess Member State performance and suggest action

Note: Based on a preliminary assessment of barriers per study commissioned by ACER (list of barriers non-exhaustive)

Demand Side Flexibility & Network Codes

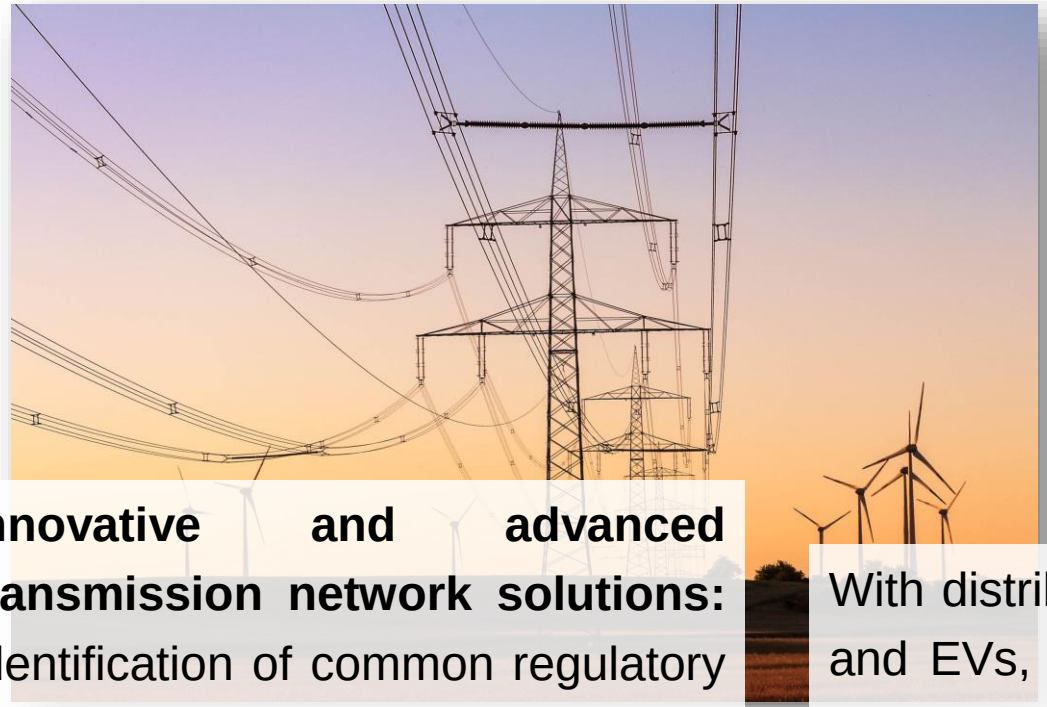
Demand Side Flexibility (DSF) understood to cover flexibility at **transmission** and at **distribution** level. Regulatory assessment to enable DSF:

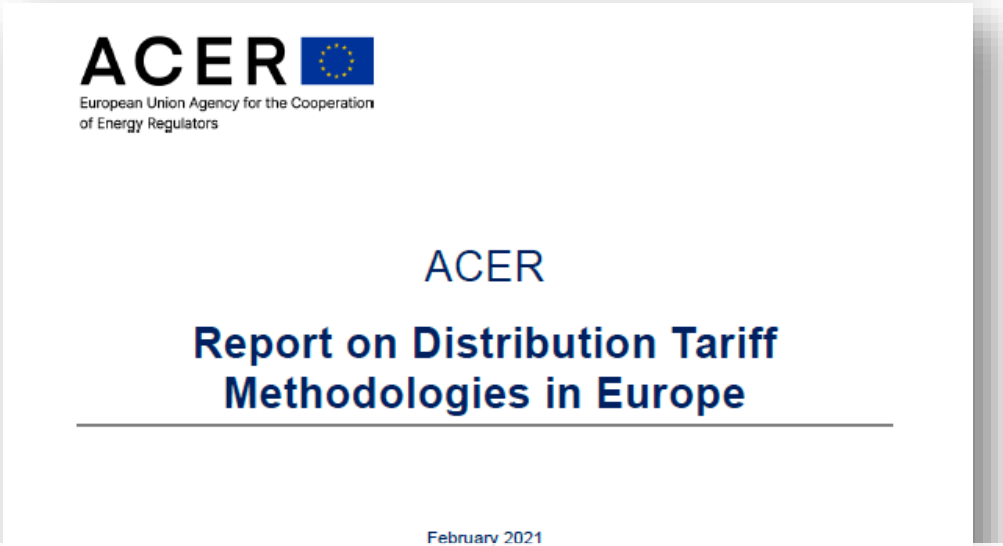
- At **wholesale/transmission level** (well-known barriers):
  - Absence of EU frameworks for aggregation and prequalification processes
  - Some level of harmonization required to enab[illegible] DSF (directly or through aggregation) to access benefits of cro[illegible] trade
  - Harmonization mainly to be reflected in existi[illegible] regulations
- At **distribution level** (more active management of [illegible] the distribution grid which affects transmission management and whole[illegible] sale markets)
  - Absence of EU framework for development of [illegible] a (local) congestion management market
  - High level principles exist, but key design features need to be clarified in network codes

ACER to perform scoping for rules in 2021 on Demand Side Flexibility, involving stakeholders along the way

Note: ASSET Study on Regulatory priorities for enabling Demand Side Flexibility, November 2020. LINK.

Infrastructure incentives and tariff-setting





Innovative and advanced transmission network solutions: Identification of common regulatory practices across Europe. Going beyond the *CAPEX vs. TOTEX* distinction, **remunerating for benefits** instead of costs.

With distributed generation, increasing demand from e.g. electric heating and EVs, increasing capability of resources to respond to time signals, **time-of-use gains in importance**.

Time-of-use tariffs, especially for larger consumers, can be a **useful tool for reducing system peak-load**, which is a main driver for network investments, thereby **promoting network efficiency**.

Note: ACER report available via LINK.

Thank you for your attention.

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