



Electricity market framework & RES integration

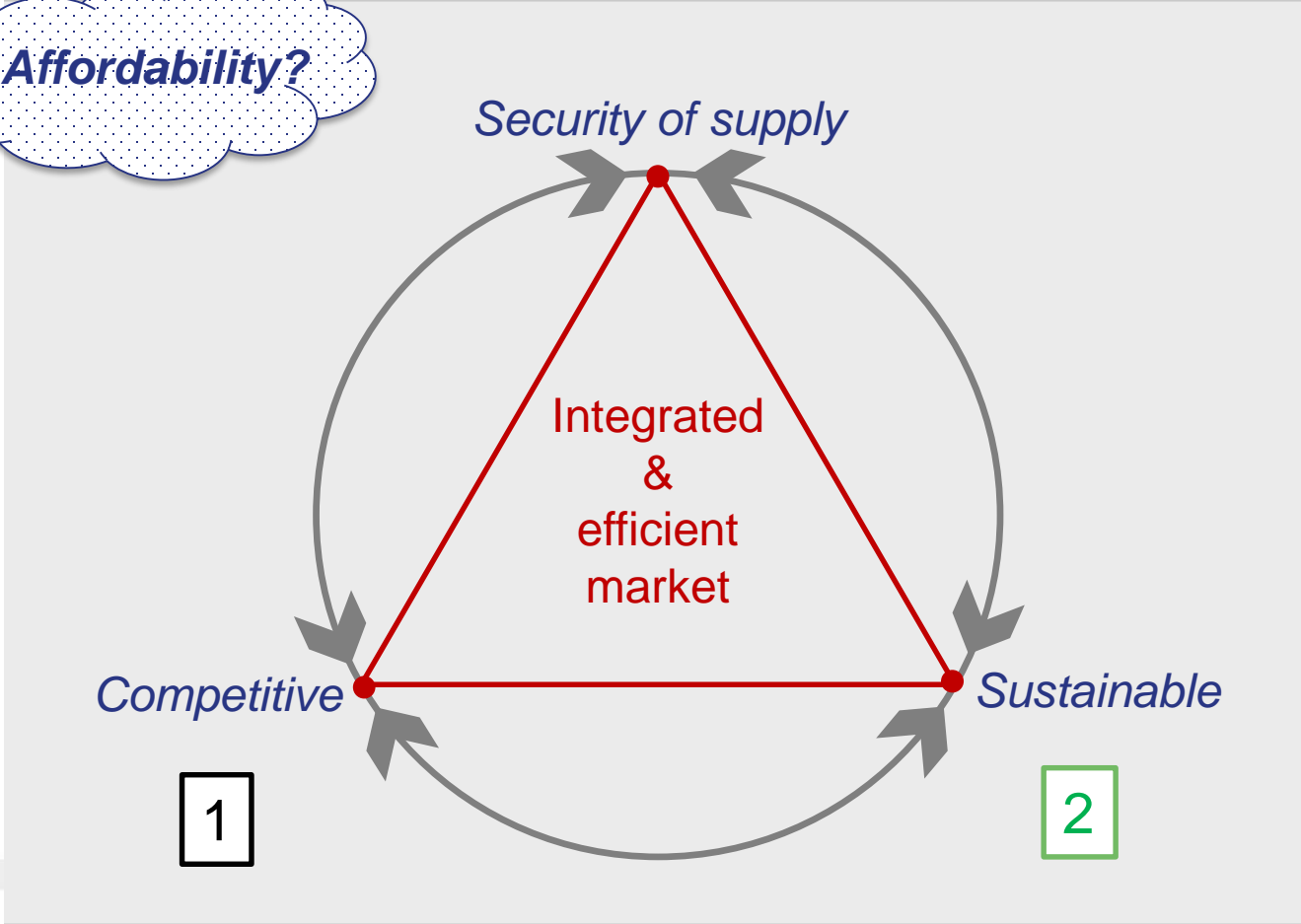
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The market we aiming for ...



Affordability?



1 Competition

- Efficient market mechanisms / clear framework / institutions
- Level playing field
- Transparent and non-discriminatory third party access
- Self-dispatch
- Bilateral trading combined with organized markets
- Price formation based on supply and demand interplay
 - Scarcity should result in price spikes
- Scheduling and balancing responsibility for all participants
- Transparency and integrity regime



Market under different designs

Importance of cross-zonal capacity

High system operation costs (redispatch)

Higher competition

Loop flows

Understanding the system constraints for each node

Low system operation costs

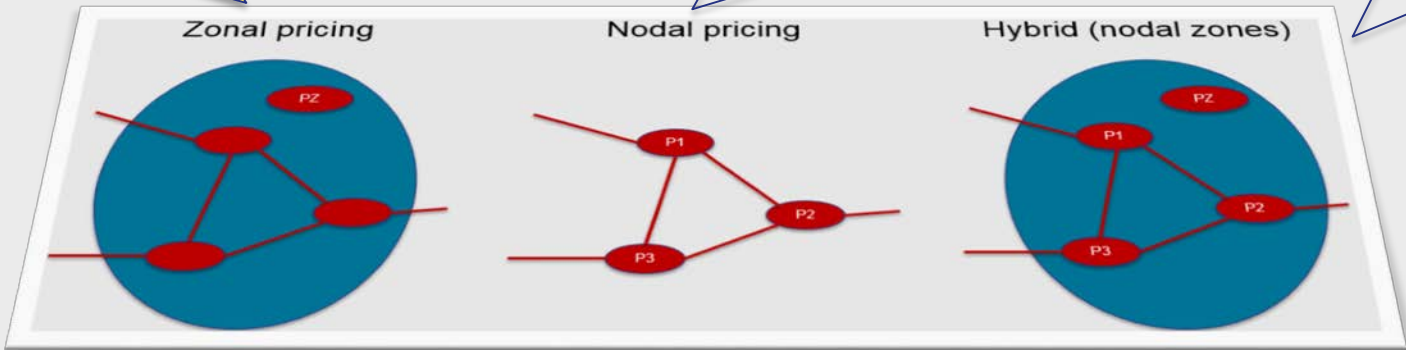
Low competition

No loop flows

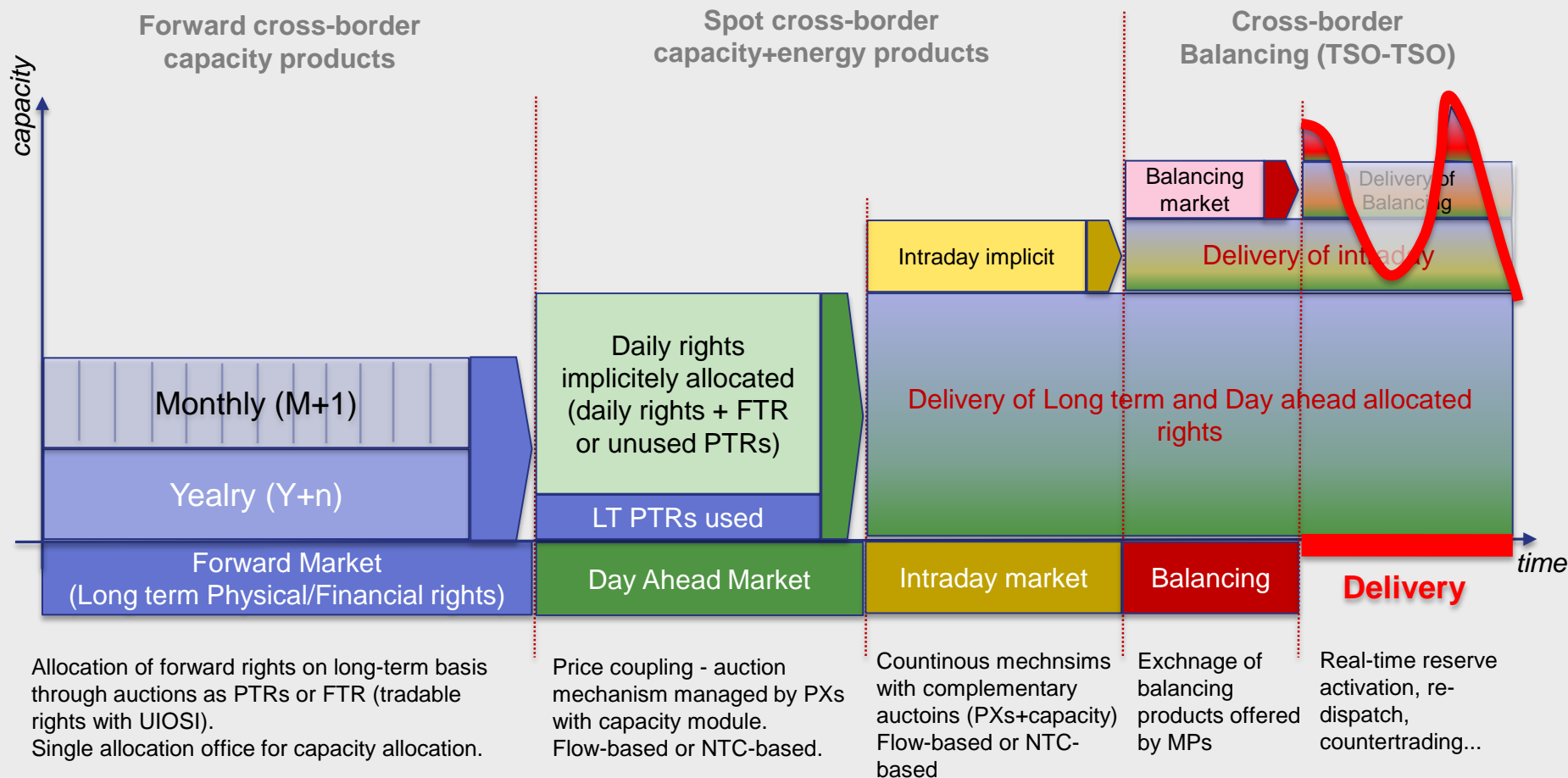
Understanding the system constraints for each node, and how they impact cross-zonal capacity

Low system operation costs, but still some countertrading necessary

Competition only on zonal level



Cross-zonal market



- Environment – LCPD / EID
- Pricing externalities (carbon price / tax)
- Energy efficiency
- **Supporting deployment of RES**
- Coal phase out
- Integration of energy and climate plan / strategies
- Decentralization & digitalization



Framework for supporting RES deployment (1)



Existing *acquis*

Third Energy Package (R=0; D=12)

- A market to support RES goals
- Priority dispatch
- NRAs' support

RES support Directive 2009/28/EC

- Key framework to support RES – setting the national targets
- Introduction of support schemes
- Share of RES includes: electricity consumption, H&C and transport
- Priority access, or
- Guaranteed access
- Minimise curtailments

Acquis to come (applicable in EU)

Clean Energy Package (R=42; D=30)

- A market to support RES goals – decarbonisation, decentralised, reward flexibility, storage, innovations, decentralisation
- NRAs' support
- New services for consumers – aggregation of demand and supply
- Market-based remuneration of RES
- Priority dispatch – from small facilities
- BRP > 400kV (200kV as of 2026) and with approved State aid
- BRP once functional intraday/balancing market in place
- Trading products for RES - bid size 0,5 MW
 - 15min from 2021 (in scheduling area)
 - 30min from 2025 (in synch. area)
- Guaranteed network availability for RES (limited redispatch max5% of the RES generation) / zero for self-generated electricity

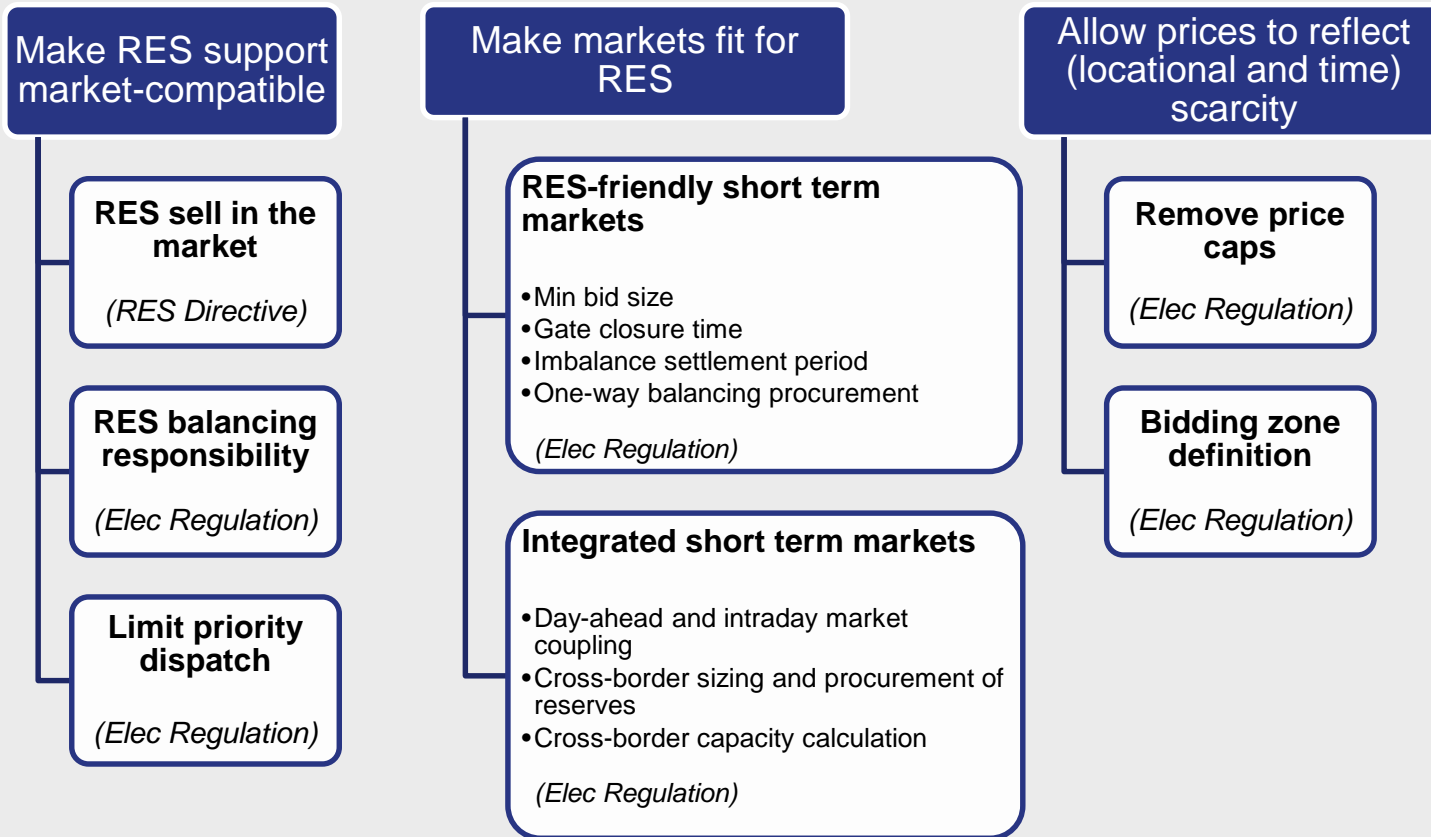
Framework for supporting RES deployment (2)

Acquis to come (applicable in EU)

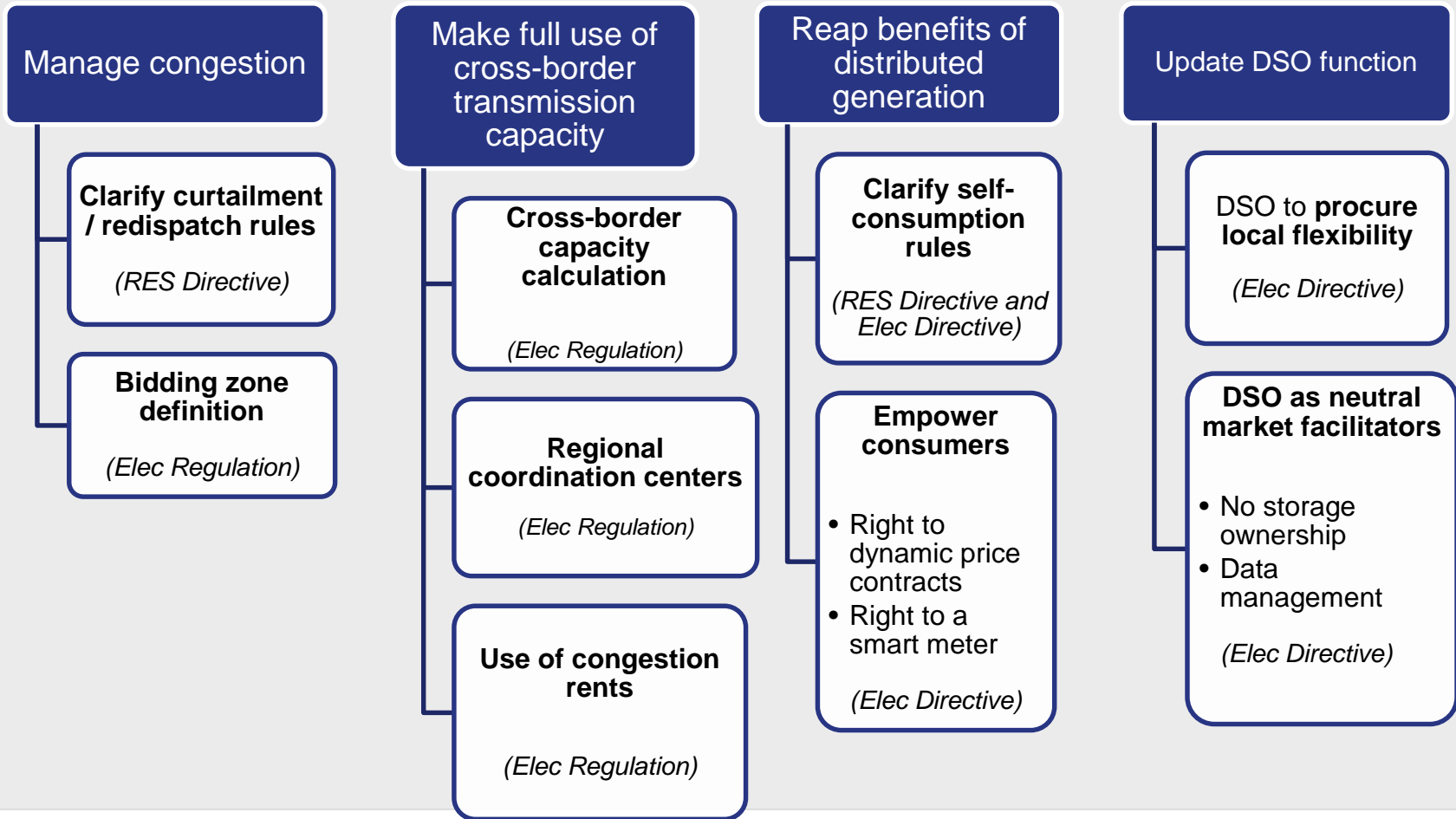
RES support Directive 2018/2001

- Key framework to support RES – setting the national targets 2030
- Support schemes – that increase integration of RES; market based and market-responsive way
 - Market premium (sliding or fixed)
- Support of small-scale installations
- Share of RES includes: electricity consumption, H&C and transport
- Renewables self-consumptions – store and sell excess

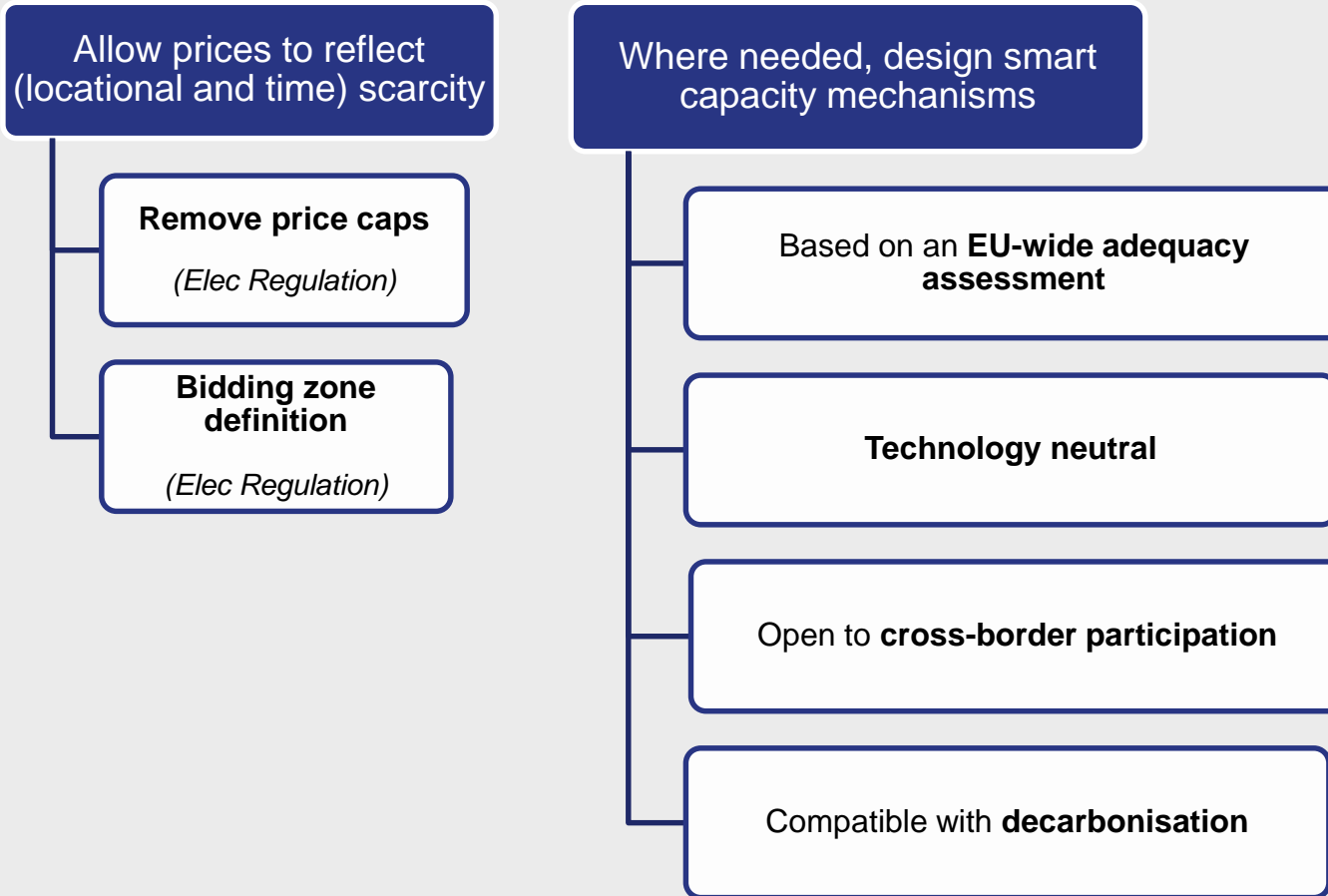
Electricity market: issues & challenges (1)



Grid management: issues & challenges (2)



Adequacy: issues & challenges (2)



Contracting Parties ID national markets: ECRB report



TABLE 1: Close of day-ahead & opening of intraday national market

Contracting Party	GCT of the D-1 market	Is ID market allowed after D-1 GCT? GOT for ID?	GCT of the ID market	Centralised platform in place for exchanging electricity on ID
AL	D-1, 14:00	Yes	H-1	No
BiH	D-1, 15:30	Yes, ID opens from D-1, 18:00	H-1	No
GE	No ID market			
KS*	D-1, 13:00	Yes, ID opens after D-1 GCT	H-2	No
MK	D-1, 15:45	Yes, ID opens from D-1, 18:00	H-1	Yes, <i>MEPSO's</i> MMS
MD	No ID market			
MN	D-1, 18:00	Yes	H-1	No
RS	D-1, 14:30	Yes, ID opens from D-1, 18:00	H-1	No
UA	No ID market			

https://www.energy-community.org/dam/jcr:04ed1975-53ab-423b-b120-e01b12bc50c3/ECRB042019_intraday.pdf

Contracting Parties ID x-border markets: ECRB report

TABLE 2: Access to cross-zonal capacity

Contracting Party	GCT of the D-1 cross-zonal nominations	ID capacity allocation	GOT and GCT for ID cross-zonal allocation?	Allocation mechanism
AL	D-1, 14:00	Only on borders with MN and Greece	GOT: D-1, 18:00 GCT: H-1	AL-MN: Continuous FCFS (no price) AL-GR: Auctions and auction price are applied
BiH	D-1, 15:30	Yes, all border	GOT: D-1, 18:00 GCT: H-1	Continuous FCFS No price
GE	No ID cross-zonal access			
KS*	See footnote 2			
MK	D-1, 15:45	Only on the border with RS&KS zone	GOT: D-1, 18:00 GCT: H-2	Continuous FCFS No price
MD				
MN	D-1, 14:30 Exception for MN-AL: D-1, 14:00	Yes, all borders	GOT: D-1, 18:00 GCT: H-1	Continuous FCFS No price
RS	D-1, 15:30	Yes, except on the border with Bulgaria	GOT: D-1, 18:00 GCT: H-1 GCT: H-3 for auctions	Continuous FCFS No price RS-Romania: Four auctions per day and auction price is applied
UA	No ID cross-zonal access			

Thank You!

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