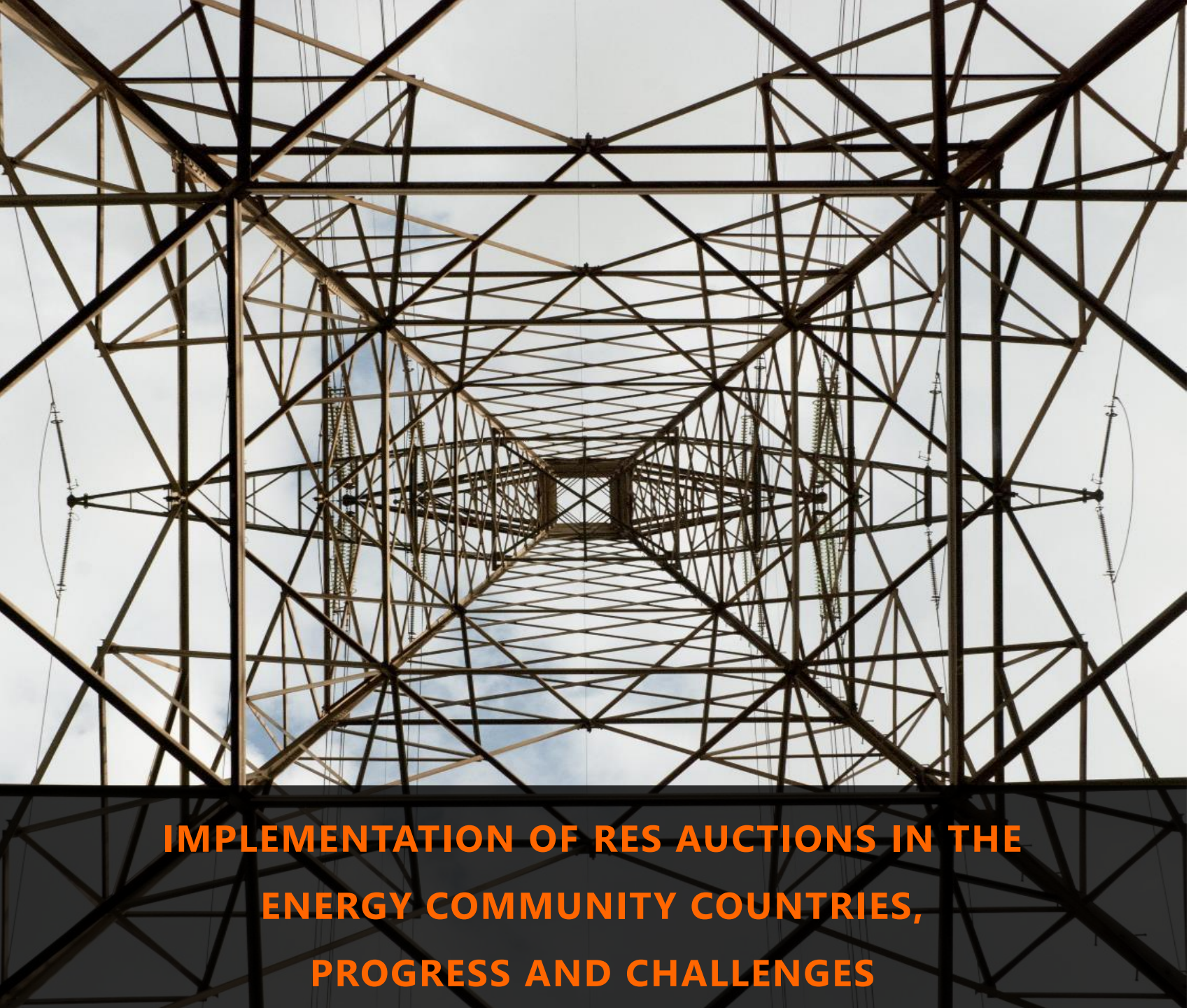

IMPLEMENTATION OF RES AUCTIONS IN THE ENERGY COMMUNITY COUNTRIES, PROGRESS AND CHALLENGES

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Current state of government auctions in EU and ENC member states

12.12.2023

Agenda

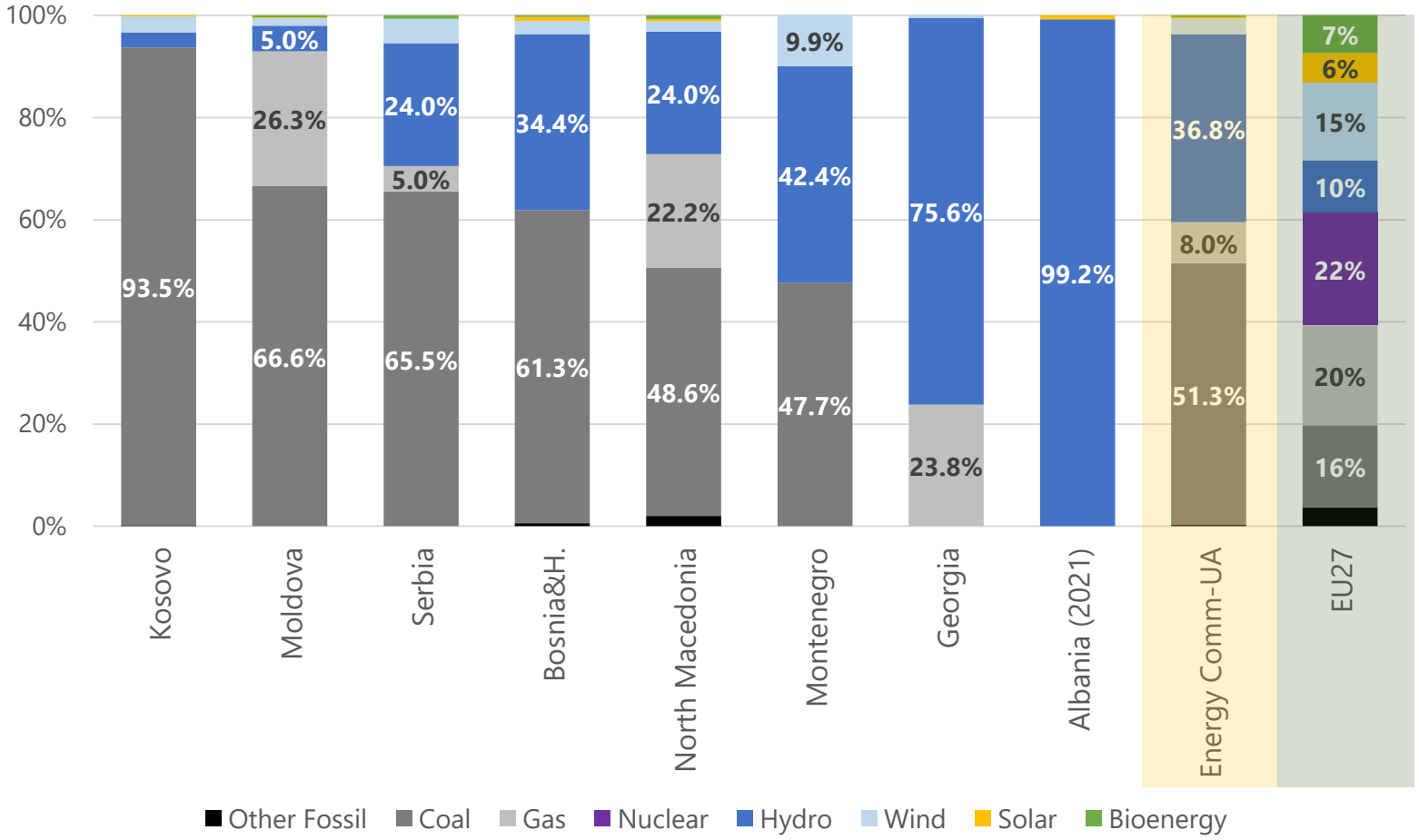
- **Electricity sector overview of the Energy Community countries**
  - Electricity mix
  - Renewable share and RES capacities

- **RES auctions in the Energy Community countries**
  - Date of first auction, number of implemented auction rounds, auctioned volumes
  - Auction design: demand, prequalification, procedure, remuneration scheme
  - Outcome: Participation (competition), contracted volumes, prices

- **Conclusions**
  - The status of EnC auctions in comparison with the EU RES support schemes
  - Challenges of the RES auctions in the EnC countries

Electricity mix in the EnC countries

Electricity mix in the Energy Community and in the EU (2022)



Source: EMBER

EnC vs EU

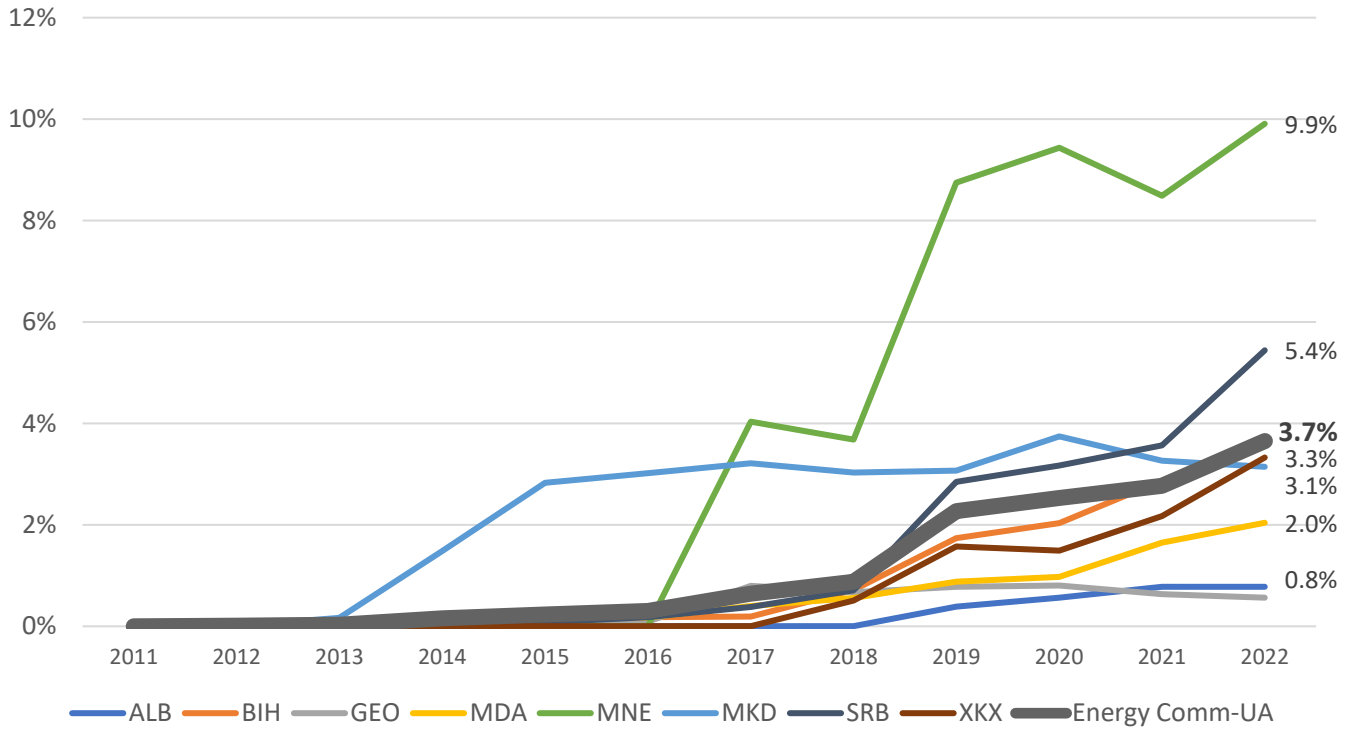
- High share of coal
- Limited role of gas
- No nuclear
- Same share of RES, but different technologies (High role of hydro)

Within EnC countries

- High diversity:
  Coal- vs Hydro-dominance
- Presence and importance of gas
- Very limited role of PV, wind and other RES

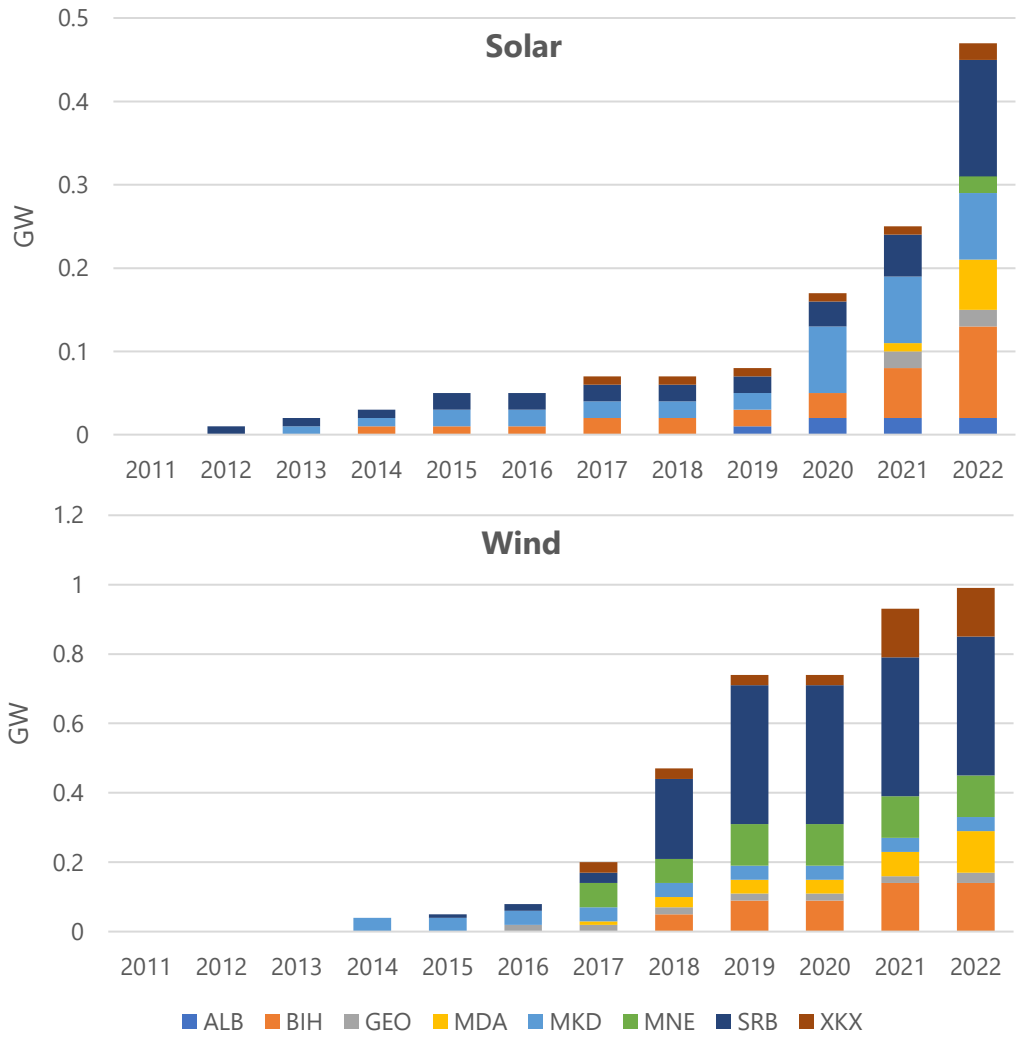
The development of solar and wind in the EnC

RES-E share without hydro in the EnC countries



- EnC average is only 3.7%
- Highest share: Montenegro (wind, since 2017)
- Faster development since 2018/2019 (wind)
- PV deployment takes the lead since 2020

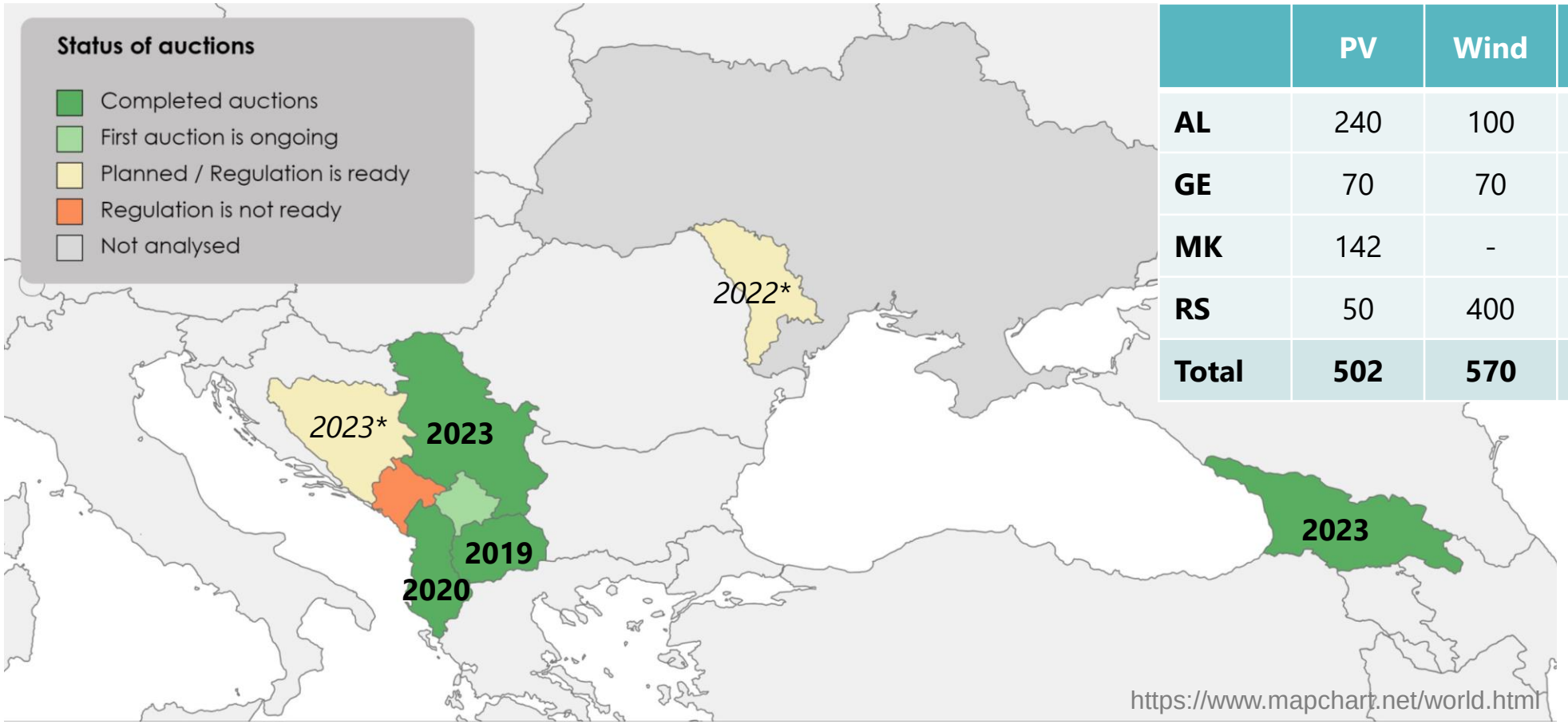
Solar and wind capacity development in the EnC



Source: EMBER

RES auction overview in the Energy Community

Year of the first auction



Total volumes – completed auctions (MW)

	PV	Wind	Other	Total	Nr. of rounds
AL	240	100	-	**340**	**3**
GE	70	70	160	**300**	**1**
MK	142	-	-	**142**	**3**
RS	50	400	-	**450**	**1**
Total	**502**	**570**	**160**	**1232**	**8**

Source: REKK data collection

***Alternative formats:**

- **MD**: support (FiT) was allocated in a *first come first served* basis
- **BA**: Concession-based scheme

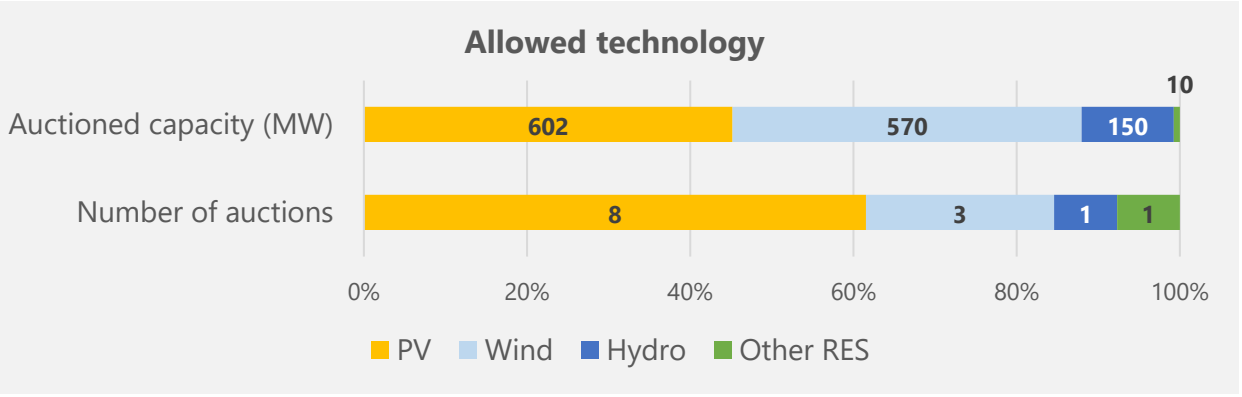
Status of auctions in other countries:

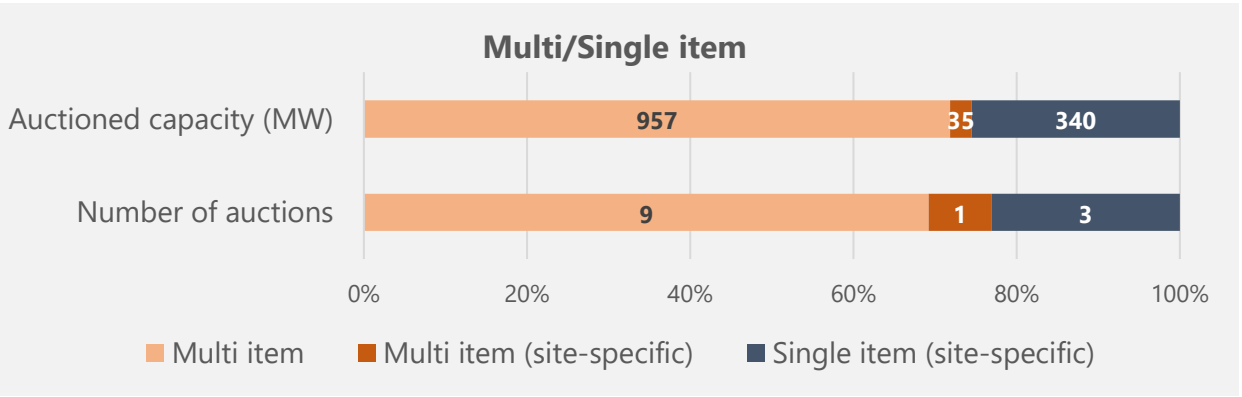
- **KO**: 100 MW PV (in progress) + 150 MW wind (planned in 2024)
- **BA**: Regulation is in place (FiT for small-scale, FiP for large-scale), call is not published yet
- **MD**: Regulation is in place (FiT), call is expected in 2024 (60 MW PV, 105 MW wind, 65 MW biogas/biomass)
- **ME**: The intention is declared (2022), regulation is not in place

Auction demand and prequalification

Auction demand

- All (13) auctions are capacity-based and technology-specific
- Most auctions (8) focus on PV, but the wind auctions are larger in average
- Multi-item auctions are general, but AL and KO organized single-item site-specific auction(s) first





Source: REKK data collection

Prequalification

- EnC auctions apply material and financial prequalification similarly to EU Member States
- Required financial prequalification (bid bonds) are in line with average EU level

	1st stage (bid)	2nd stage (contract)
North Macedonia	50 EUR/kW	
Serbia	30 EUR/kW	60 EUR/kW
Georgia	10 EUR/kW	20 EUR/kW

- The required prequalification are rather strict in general: Proof of technical expertise and financial capability of bidders on top of project implementation milestones (except in Serbia)
- Examples:
  - Bid security of 750 000 EUR (KO)
  - Balance sheet and income criteria (MK)
  - At least 5-year experience with wind power plant development (AL)
  - Plans about associated infrastructure, e.g. roads (GE)

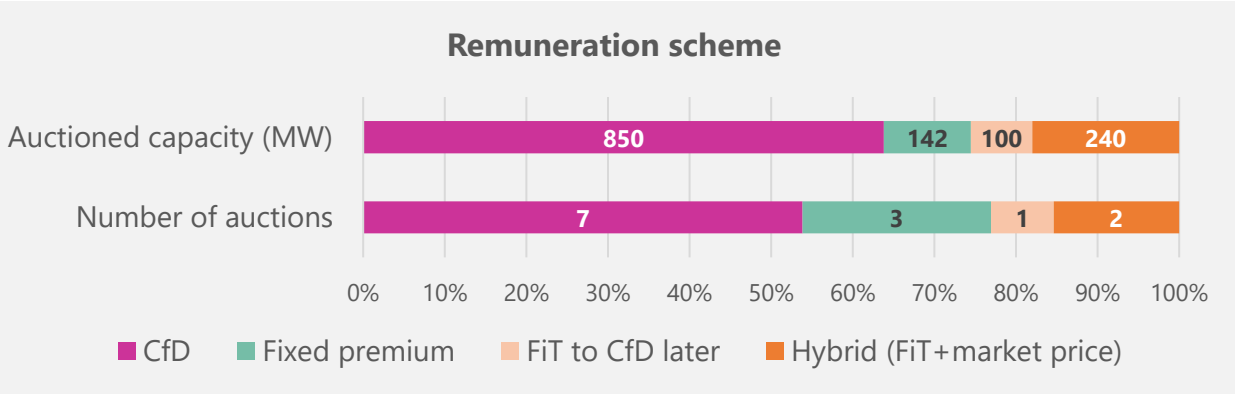
Winner selection and remuneration

Winner selection procedure

- Selection is based only on price in case of all (13) auctions
  Other criteria are covered by prequalification
- Different practices:
  - 1 round static: Prequalification & bid together
  - 2 rounds static: Only prequalified participants submit bids
  - Dynamic: Electronic auction (also as a second round)

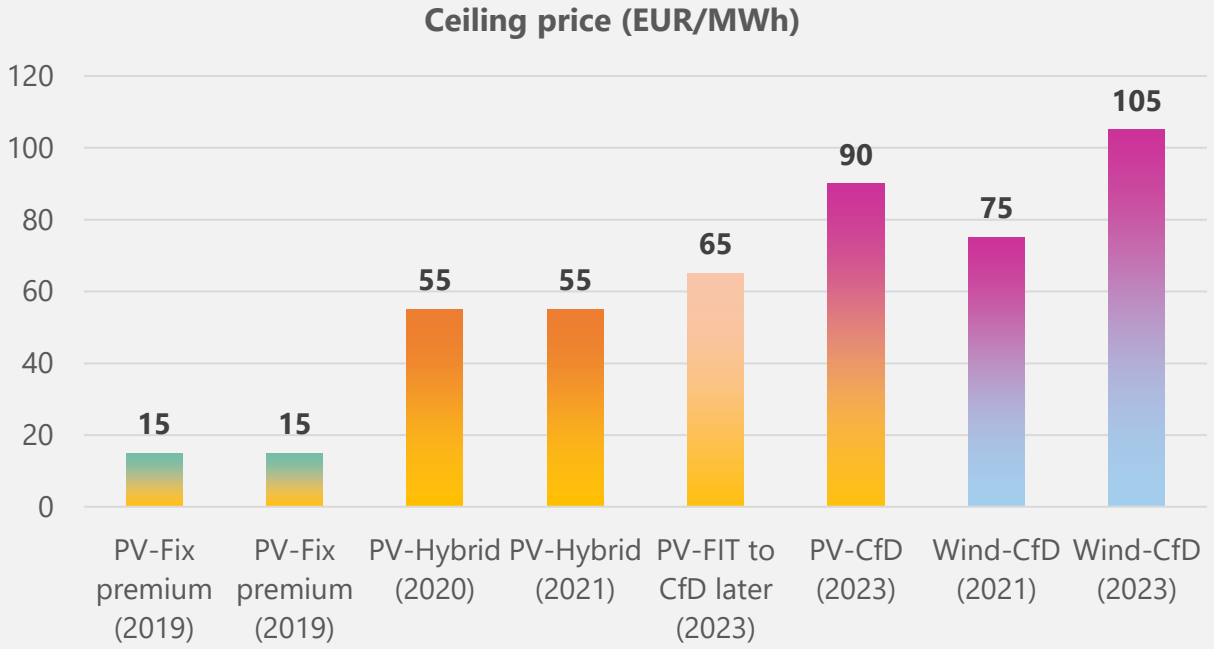
Remuneration scheme

- CfD is the most common
- Hybrid systems instead of classic FiT
  - AL: 50-70% FiT + 30-50% market price (investor has to sell)
  - KO: FiT that will be converted to CfD
- Support period is 15 years in all cases



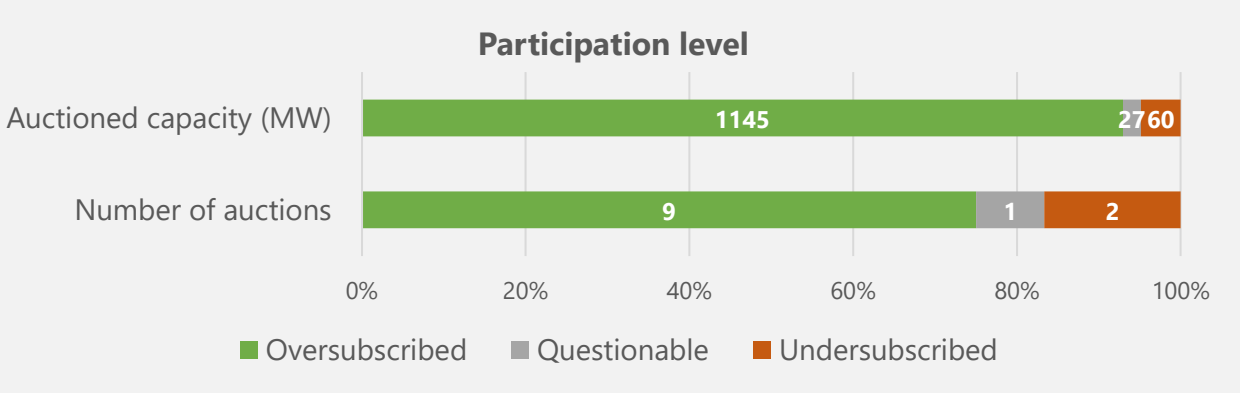
Ceiling price

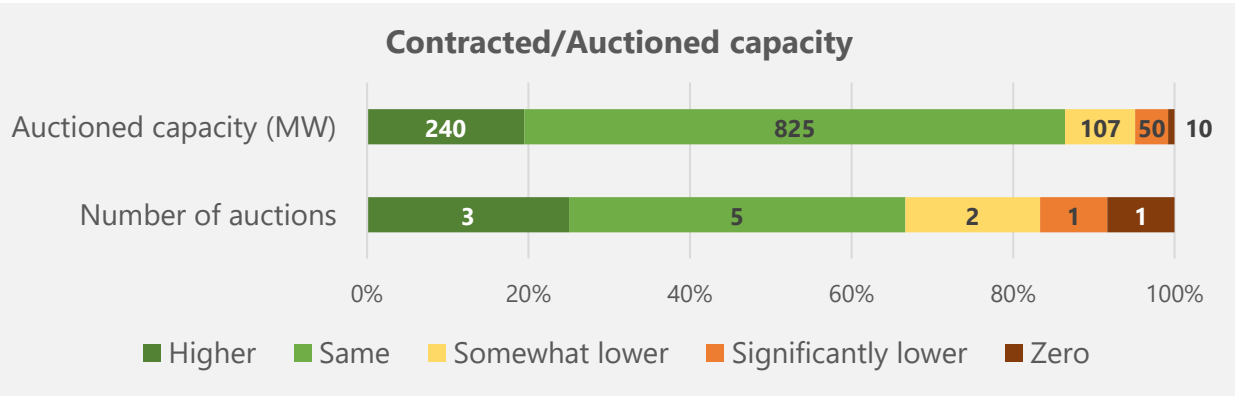
- Common: predefined in the call (in line with EU practice)
  - Increased from 2020/21 to 2023
- Alternative (endogenous):
  - Electronic auction: The starting point of the second round is the result of the first round (MK)
  - Median tariff principle: The median of all bids is the maximum price (GE)

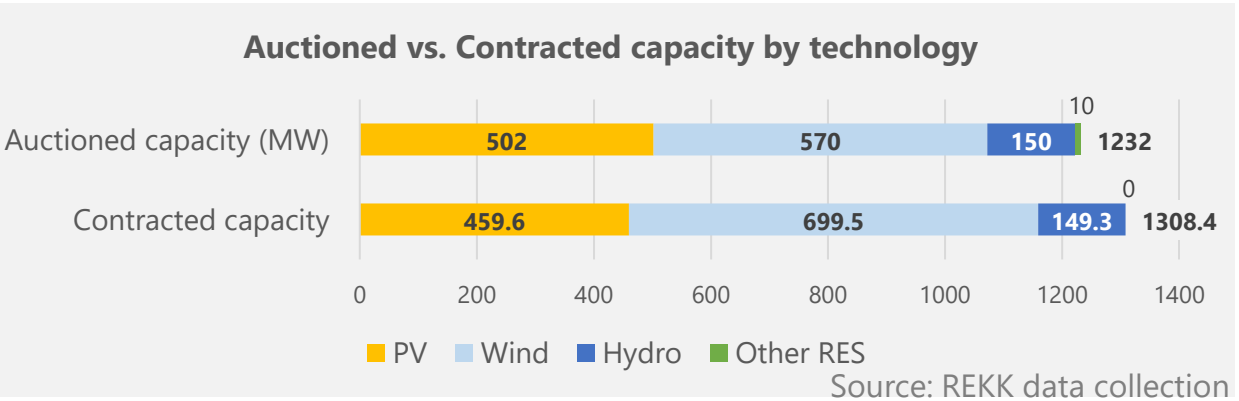


Source: REKK data collection

Participation level and contracted capacities







Source: REKK data collection

High general participation level

- Only 2 undersubscribed auction (GE-Other RES-2023 and RS-PV-2023)
- One questionable (MK-PV-2019)
- In one case (AL-Wind-2021) all qualified bids was accepted that led to higher average price but also higher contracted capacities (100 MW → 222.5 MW)

Auctions succeed in contracting the planned capacities

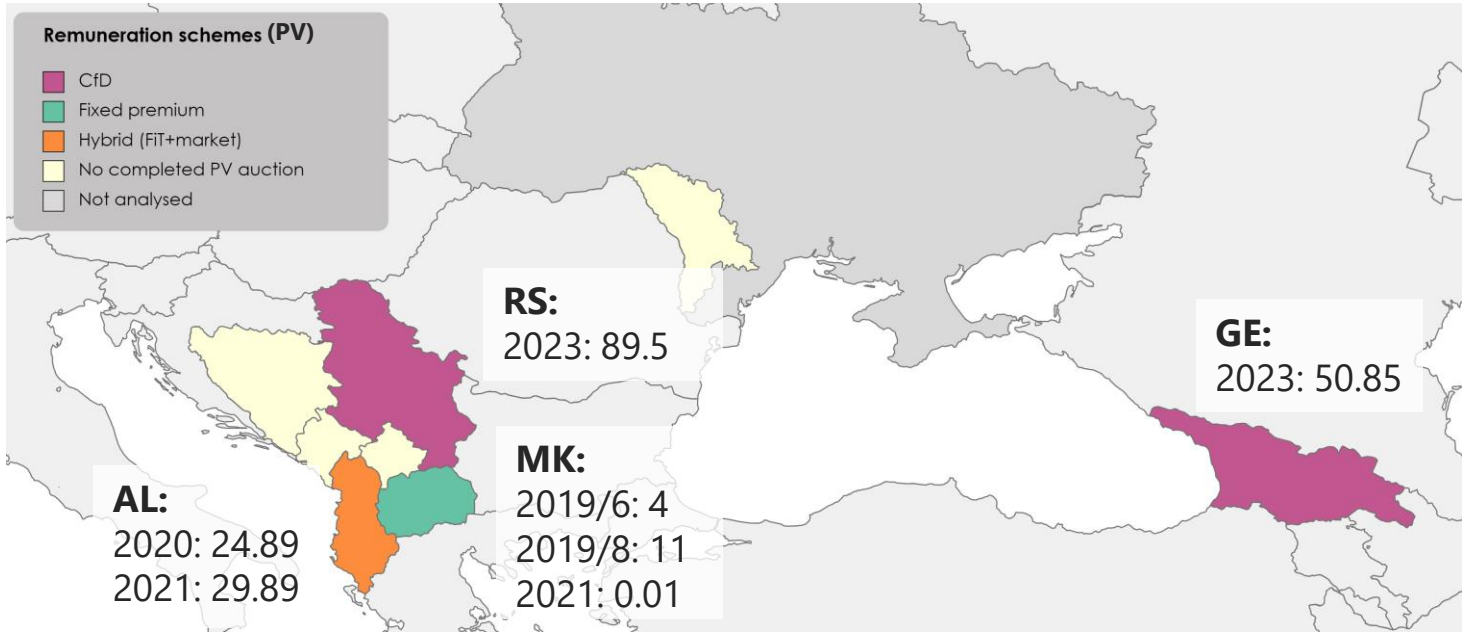
- Contracted capacities exceeded the auctioned capacities in 3 cases (AL-Wind-2021 and GE-Wind/PV-2023)
- Somewhat lower allocation in 2 cases (MK-PV-2019/2021)
- The difference can be due to the handling of the marginal bid
- In EnC level: Higher total contracted capacity than planned

Prices

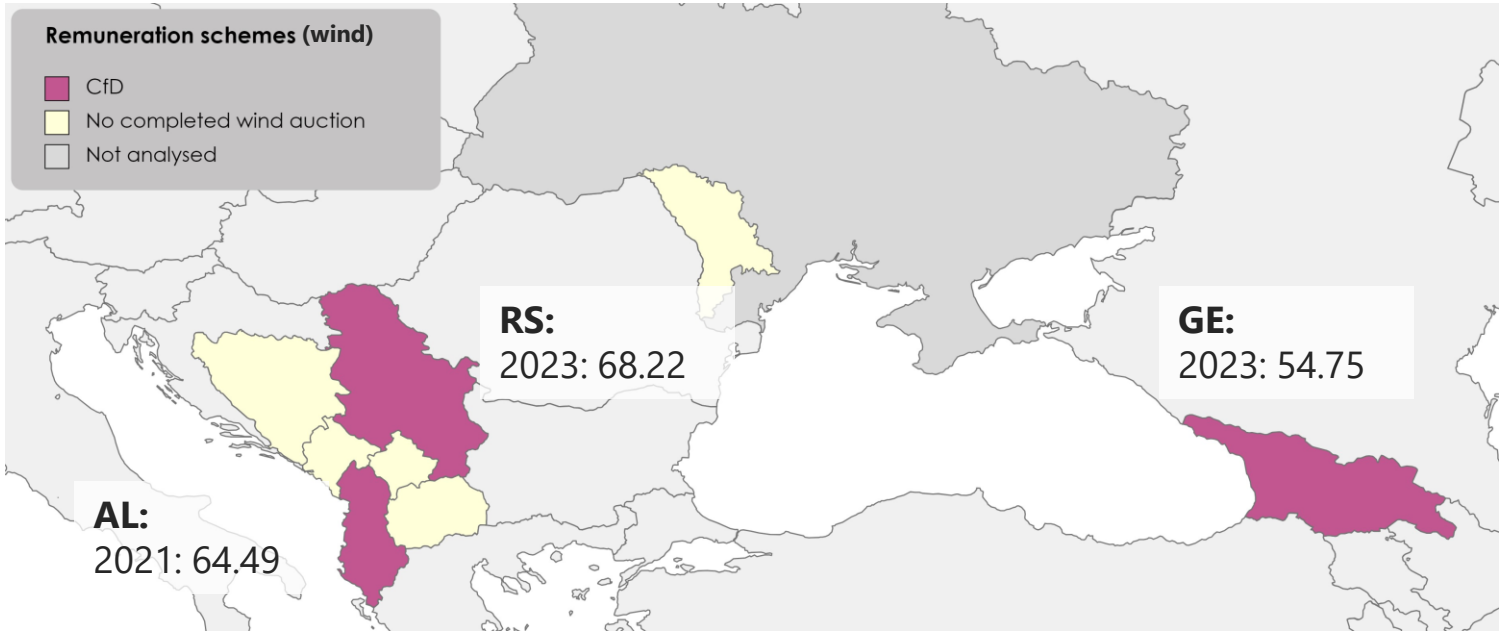
PV

- Not comparable results (different remuneration schemes)
- GE: Prices are in line with EU prices
- RS: high price (undersubscription)
- AL: Very low FiT prices are expected to be supplemented with higher market prices

Average strike prices (EUR/MWh) - PV



Average strike prices (EUR/MWh) - Wind



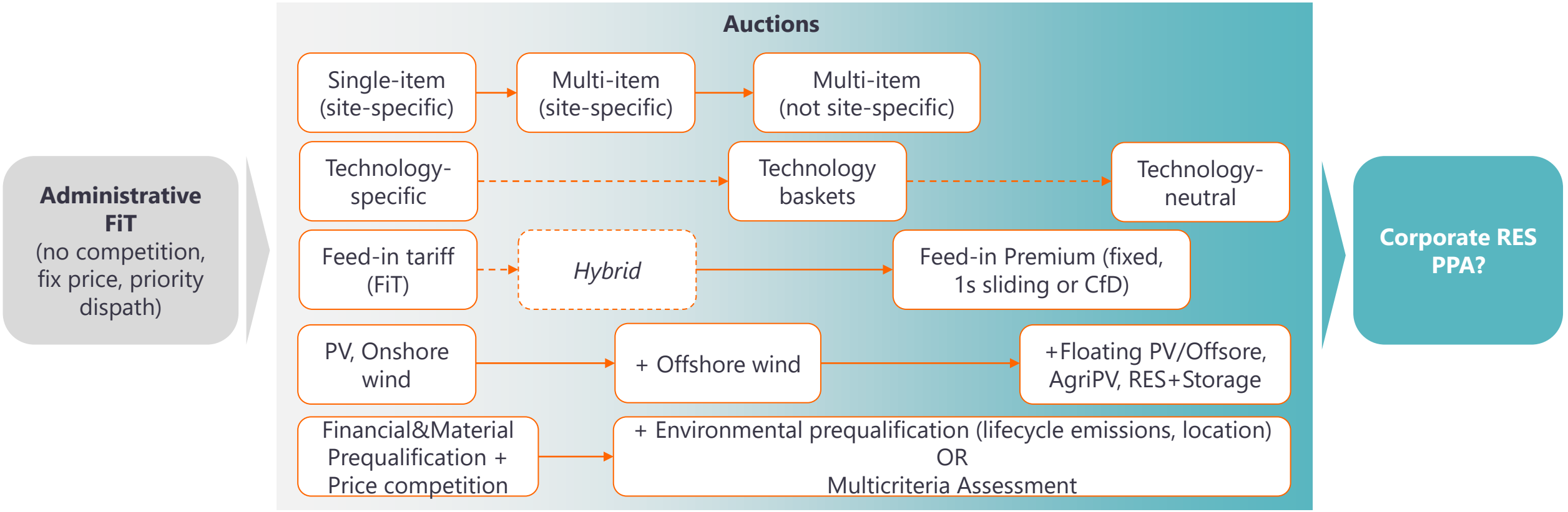
Wind

- More comparable results (all CfD)
- Prices are in line with EU (wide) price range

Source: REKK data collection

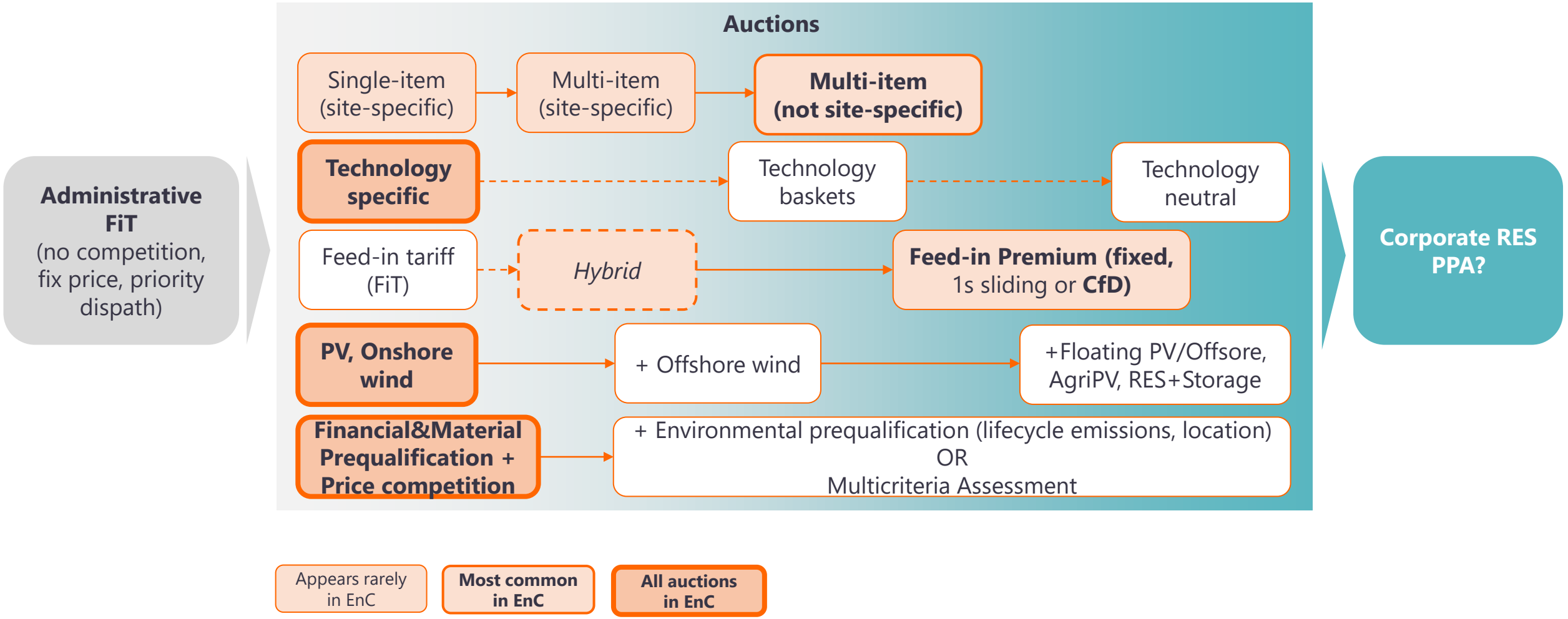
EnC auctions on the learning curve of RES support schemes

The learning curve of RES support schemes



EnC auctions on the learning curve of RES support schemes

The learning curve of RES support schemes



Challenges of the RES auctions in the EnC countries

Absence of liquid exchange markets

- For more advanced remuneration schemes (e.g., CfD), reference market price is needed
- Only RS and GE could introduce CfD
- KO: The FiT scheme will be converted to a CfD if ALPEX becomes liquid enough (ERO's decision)

Alternative:

Using power exchanges of neighbouring countries (SEEPEX, CROPEX, HUPX, OPCOM, IBEX, HENEX)

Risk aversion and mitigation (participation, price, realisation)

- Simplest auction design (technology-specific, capacity-based, static, single-item in some cases, grid connection)
- Strong prequalification criteria, targets large investors → Higher realisation rates but lower effective competition and higher price (lower contracted volumes)
- Only prequalified participants submit bids → Lower effective competition and higher price (lower contracted volumes)
- Strong control on the process (committee decides on the prequalification criteria)

Recommendations:

- Move to more market-based solutions (multi-item, multi-technology, Feed-in Premiums)
- Ensure transparency in the selection process (predefined simple rules instead of committees, communication of all rules and decisions)
- Focus on high participation (multi-technology, transparency, lower prequalification), including small local actors → lower prices, higher volumes