

A decorative graphic on the left side of the slide consists of three overlapping, right-pointing chevrons. The innermost chevron is a dark green, the middle one is a medium green, and the outermost one is a light green. They are separated by white gaps.

RENEWABLES FLEXIBILIZED

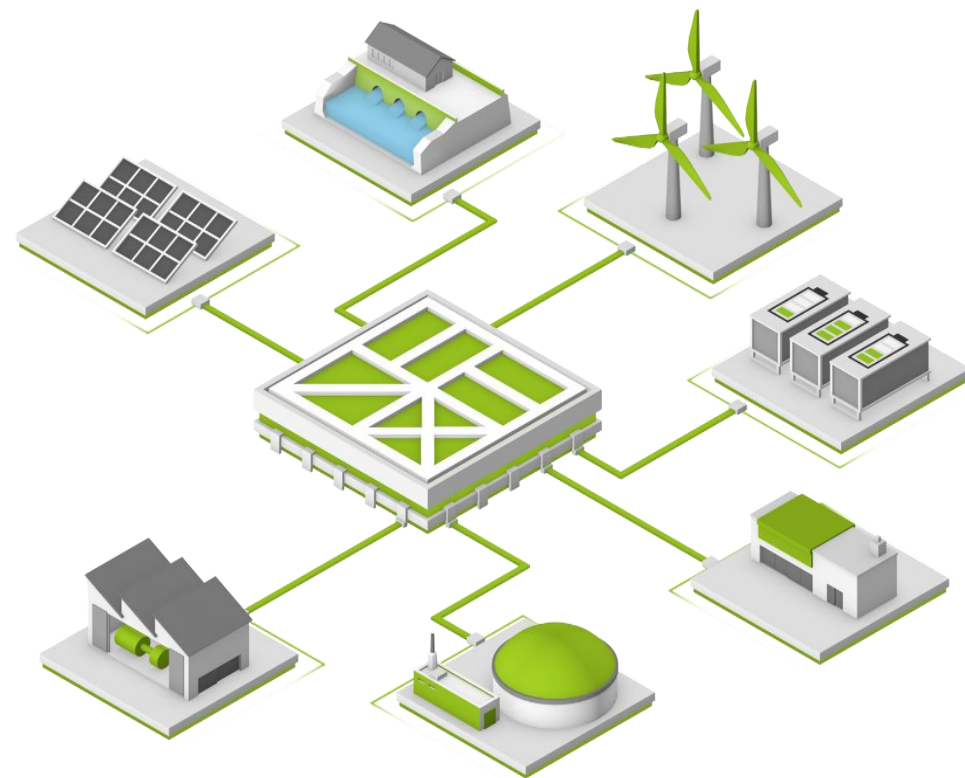
BELGIAN CASE

15.10.2024

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PART 1

NKW'S SERVICES FOR RENEWABLE PRODUCERS

15.10.2024

NEXT KRAFTWERKE PROVIDES DIFFERENT PRODUCTS TO RENEWABLE ENERGY PRODUCERS



BRP services for suppliers

Next Kraftwerke manages portfolios of suppliers with offtake portfolios and production assets

- Standard forecasting
- Netto volume is sourced on the hourly DA market
- DA sourcing and Imbalance cost are fully passed through to customer

PPA services for producers

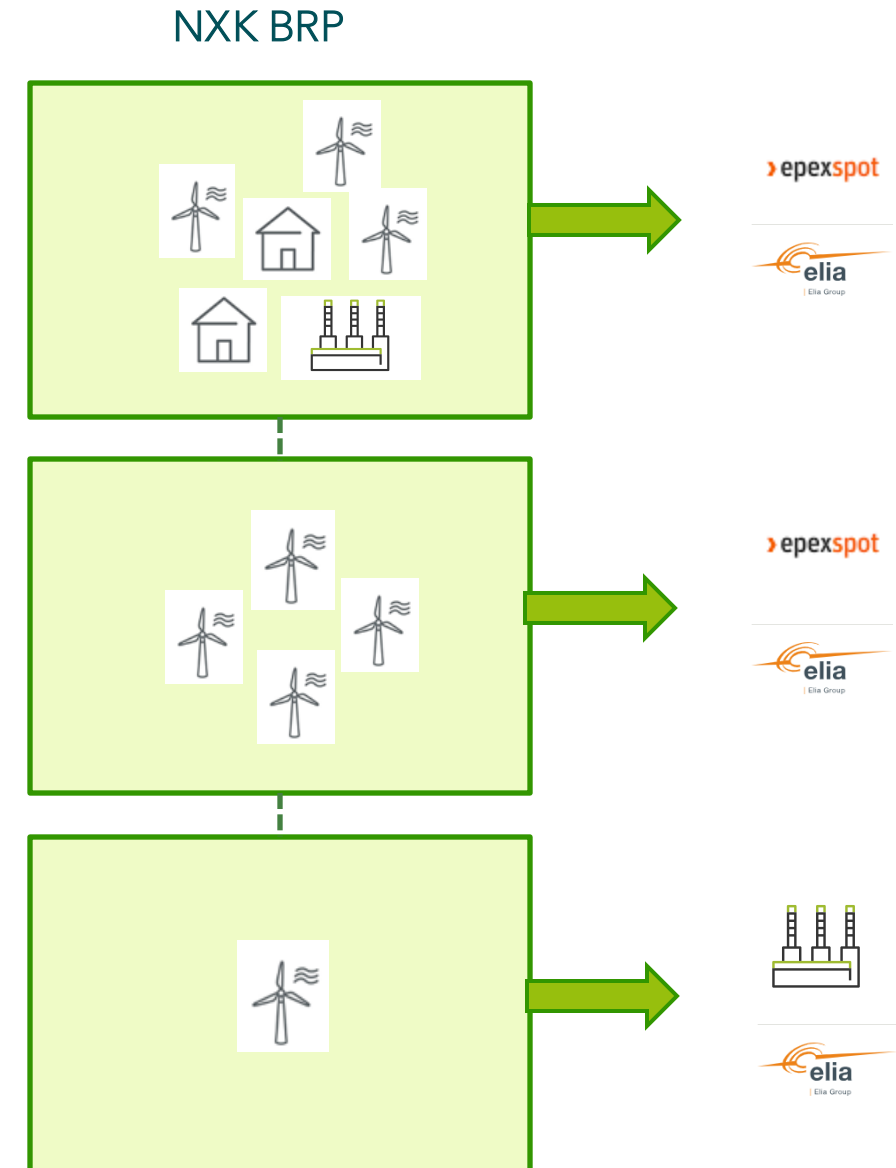
Next Kraftwerke offers PPAs to producers for a group of production assets

- Production is valorized on DA
- Client receives DA index or fixed price
- Imbalance handling fee is charged to customer
- Clients can request baseloads hedges

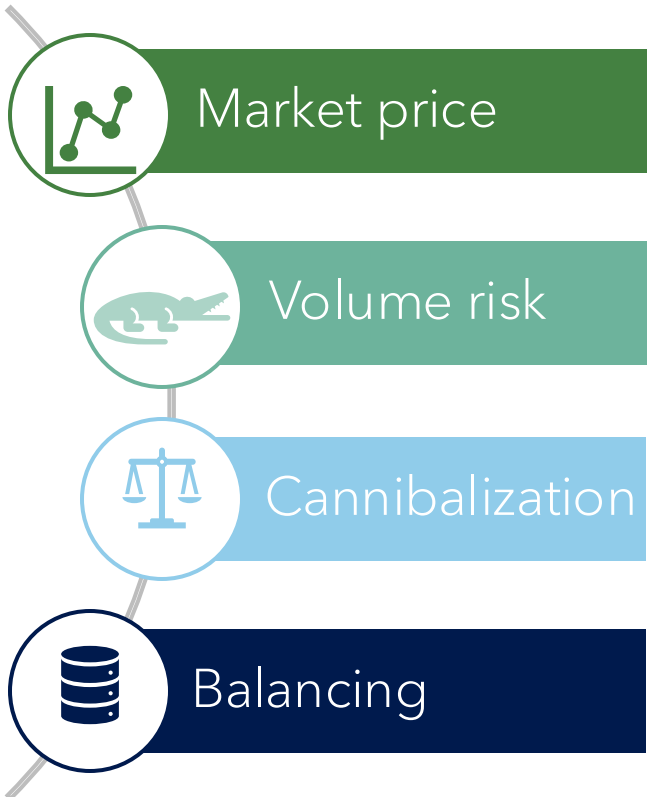
CPPA services for corporate consumers or suppliers

Next Kraftwerke offers CPPA services to producers for a group of production assets

- Production is nominated to BRP of the consumer
- Imbalance handling and sleeving fee is charged to customer



RENEWABLE PRODUCERS FACE DIFFERENT MARKET RISK THAT IMPACTS THEIR CAPTURED VALUE ON THE WHOLESALE MARKET

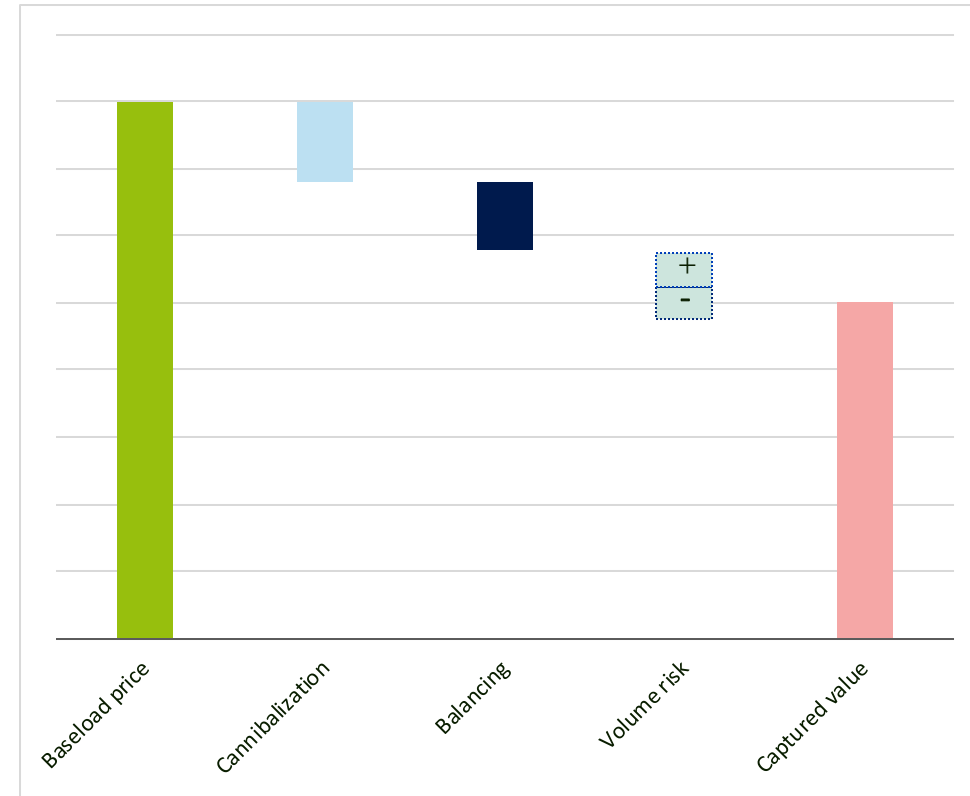


The market prices are uncertain and difficult to predict for the lifetime of a renewable asset and represent a risk on the revenue stream

Renewable energy production can vary significantly from year to year and month to month resulting in a volume risk on hedging positions. This can have a positive or negative effect

High wind/solar production goes together with lower spot prices because of the renewable merit order effect. This effect is called cannibalization

Forecasting errors of the asset creates imbalances which are settled at the imbalance price resulting in an imbalance cost



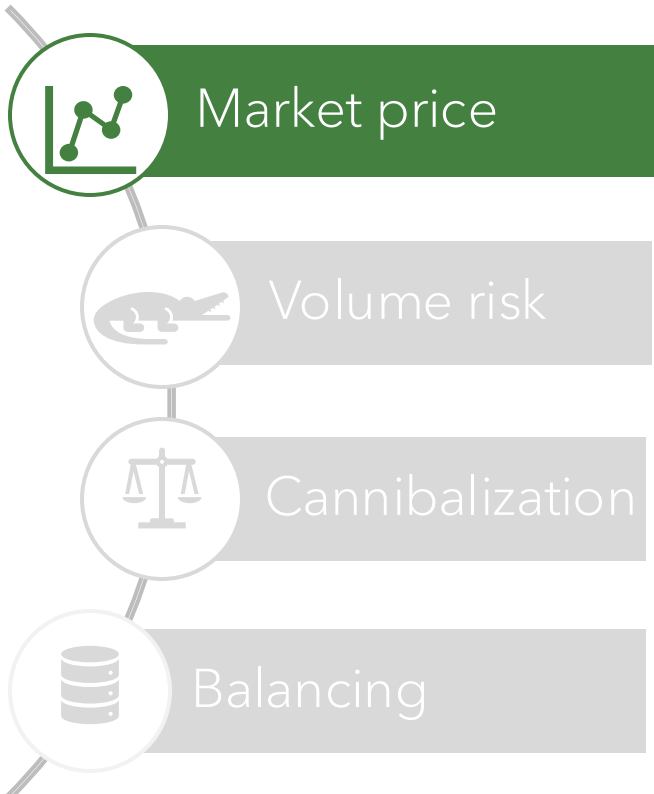


PART 2

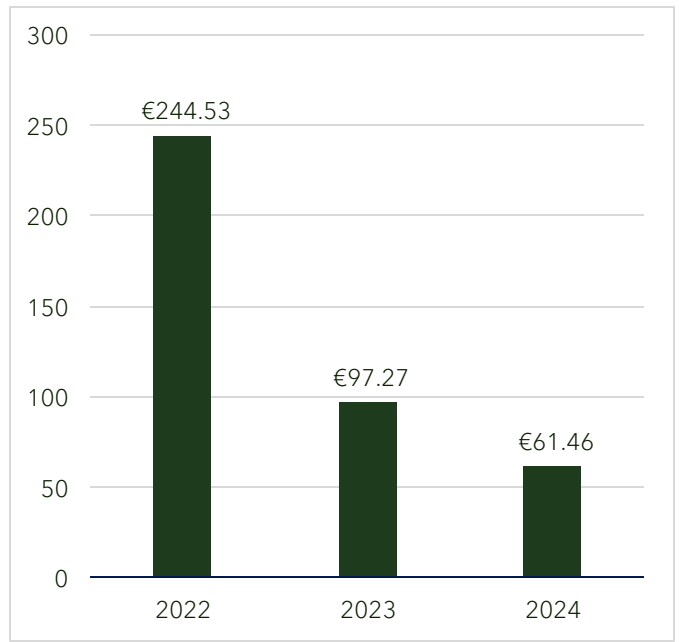
MARKET RISKS

15.10.2024

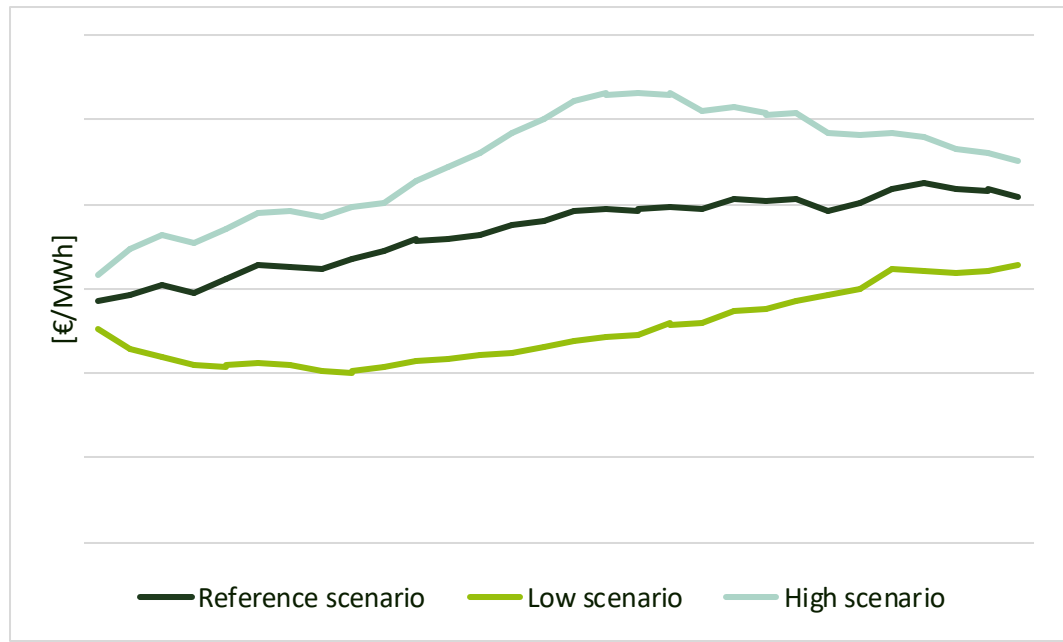
MARKET PRICES ARE UNCERTAIN AND CAN VARY DRASTICALLY FROM YEAR TO YEAR OVER THE LIFETIME OF A PROJECT



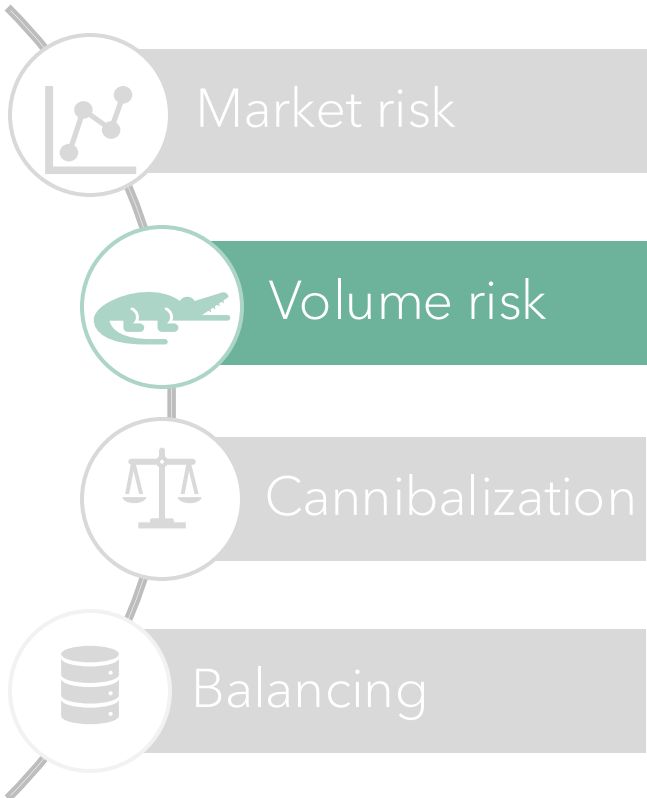
DA baseload price BE 2022-2023



Price scenarios on some country on some range



HEDGING POSITIONS CAN RESULT IN UNEXPECTED GAINS OR LOSSES WHEN PRODUCTION VOLUME DEVIATES FROM BUDGET



Volume upside or downside quadrants

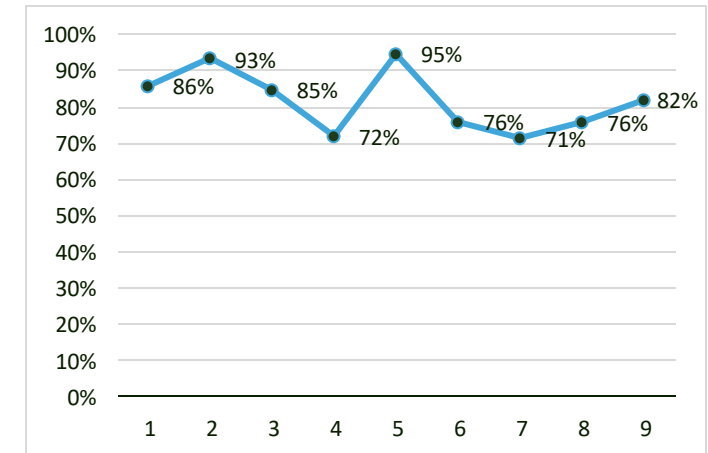
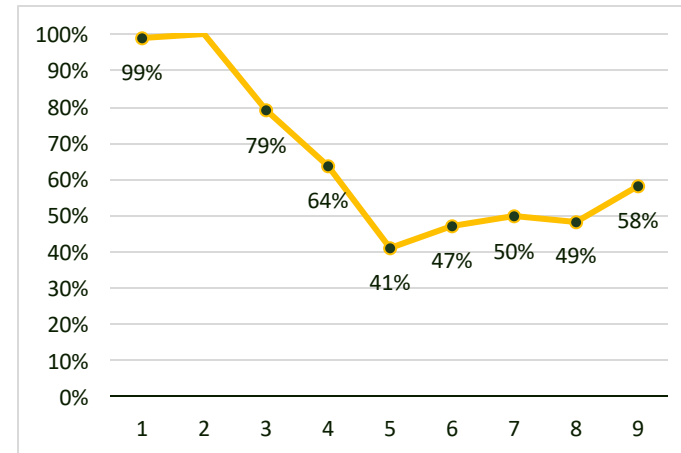
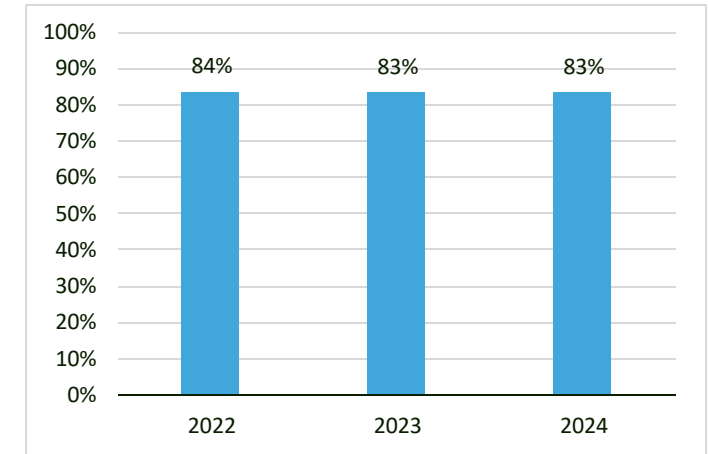
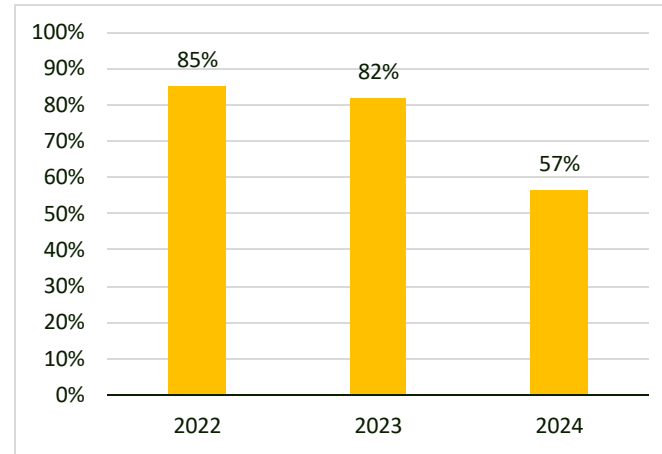
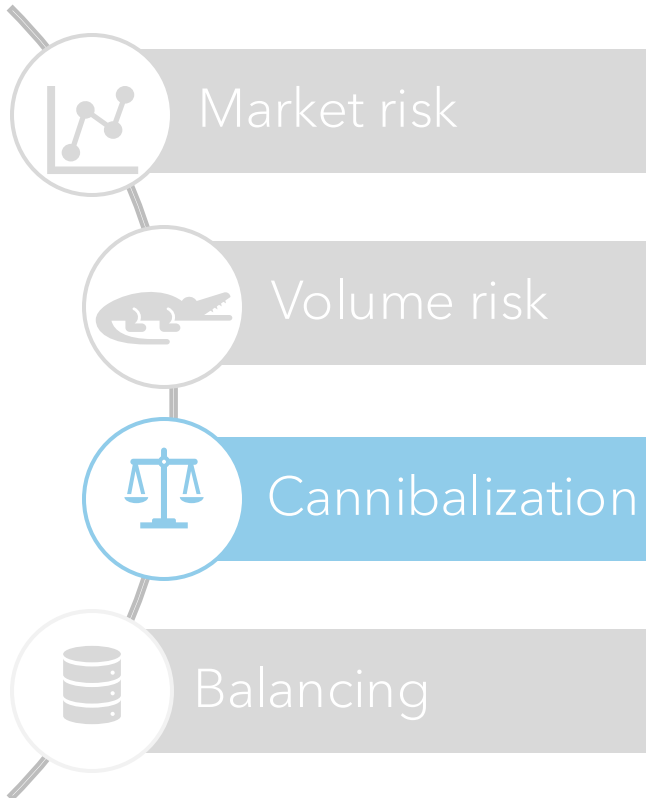
	Spot > hedge price	Spot < hedge price
Production < Budget	€	€
Production > Budget	€	€

HIGH RENEWABLE PENETRATION RESULT IN LOWER HOURLY SPOT PRICES CANNIBALIZING ITS SPOT REVENUES



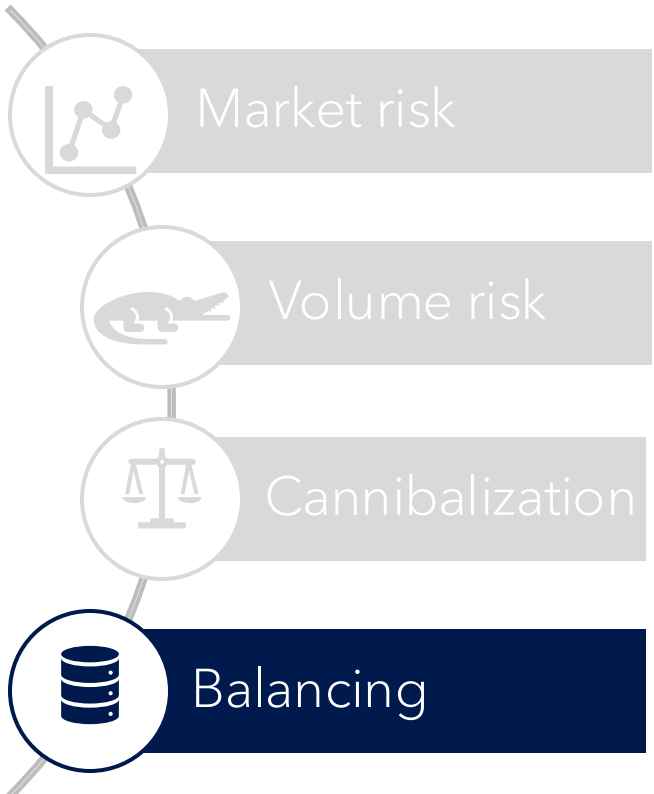
Belgian Solar – yearly and 2024 monthly cannibalization*

Belgian wind – yearly and 2024 monthly cannibalization*

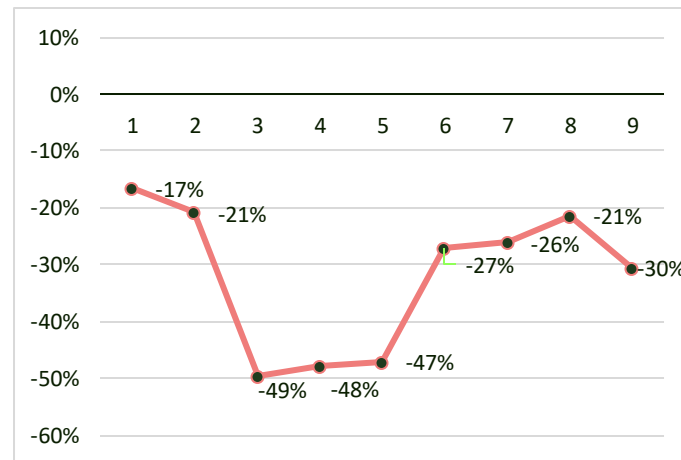
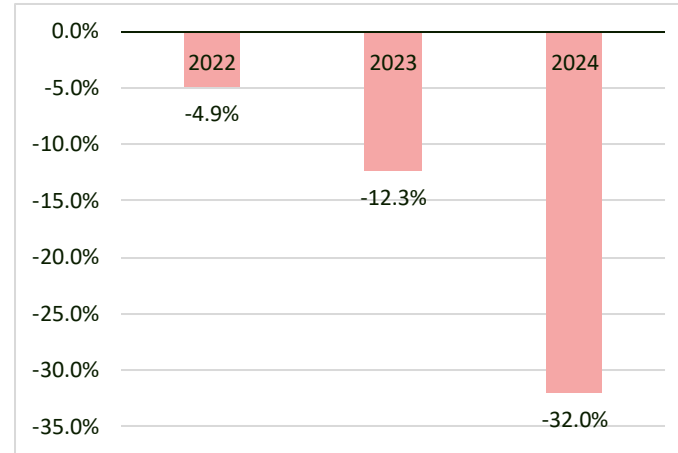


*based on Elia data

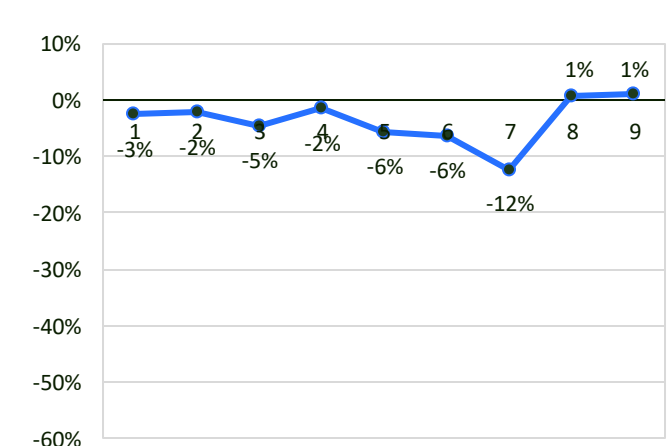
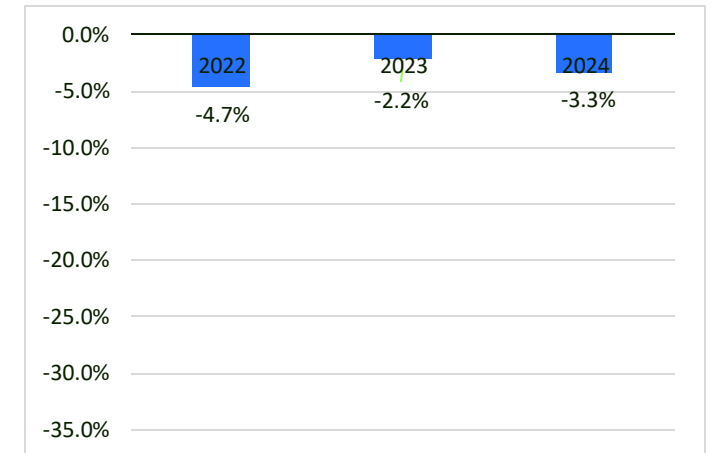
DA FORECAST ERRORS GENERATE IMBALANCES THAT ARE SETTLED AT IMBALANCE PRICES RESULTING IN A BALANCING COST



Belgian Solar – yearly and 2024 monthly balancing*



Belgian wind – yearly and 2024 monthly balancing*

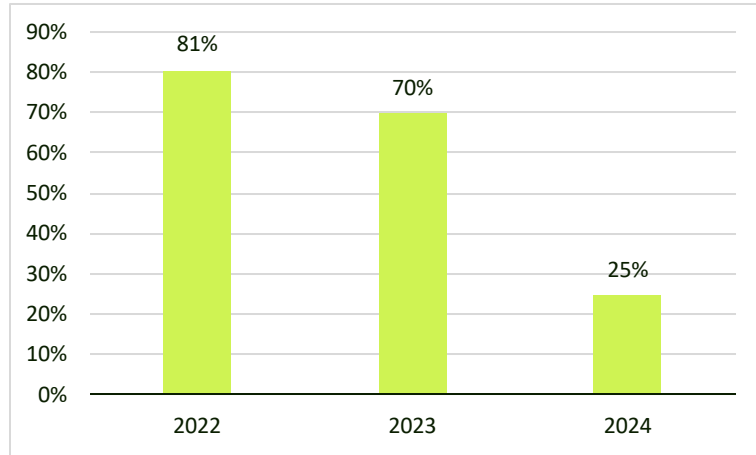


*based on Elia data

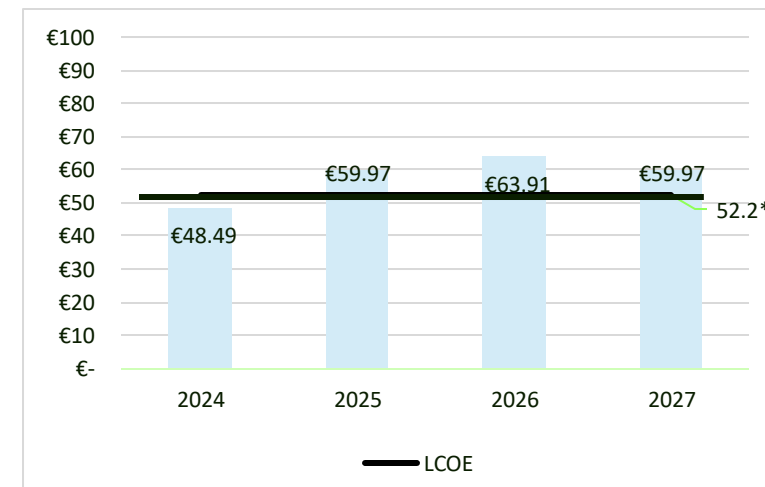
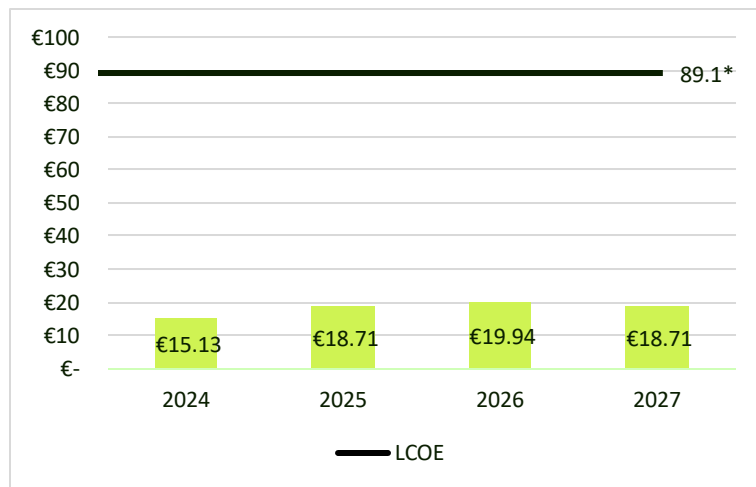
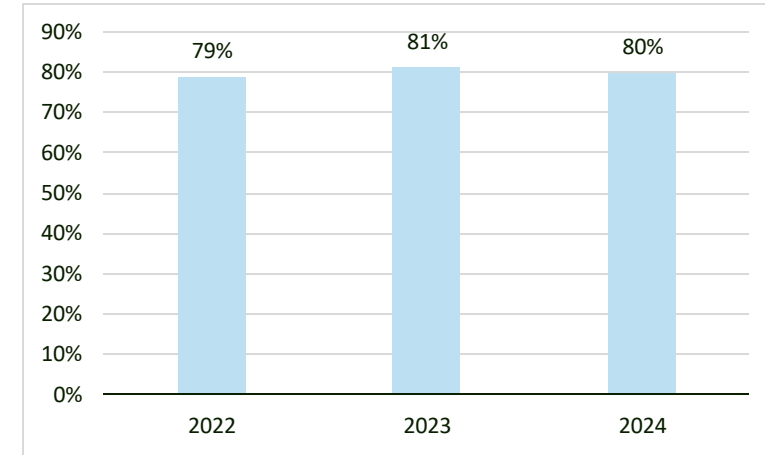
CANNIBALIZATION AND BALANCING HAVE A DETRIMENTAL IMPACT ON THE VALUE OF RENEWABLES AND SHOW INCREASING TREND



Belgian Solar – yearly captured value



Belgian wind – yearly captured value



*based on IEA data

PRODUCERS CAN TRANSFER RISK TO PPA HOLDERS OFFTAKERS NEED TO MANAGE AND PRICE HIGH AND COMPLEX RISKS



Market Risks

Producer



Offtaker

Fixed price Index or DA Average DA hourly Full pass-through

	Fixed price	Index or DA Average	DA hourly	Full pass-through
Producer		<ul style="list-style-type: none"> • Price • Volume risk 	<ul style="list-style-type: none"> • Capture ratio risk • Price 	<ul style="list-style-type: none"> • Capture ratio risk • Balancing risk • Price
Offtaker	<ul style="list-style-type: none"> • Capture ratio risk • Balancing risk • Price • Volume risk 	<ul style="list-style-type: none"> • Capture ratio risk • Balancing risk 	<ul style="list-style-type: none"> • Balancing risk 	





PART 3

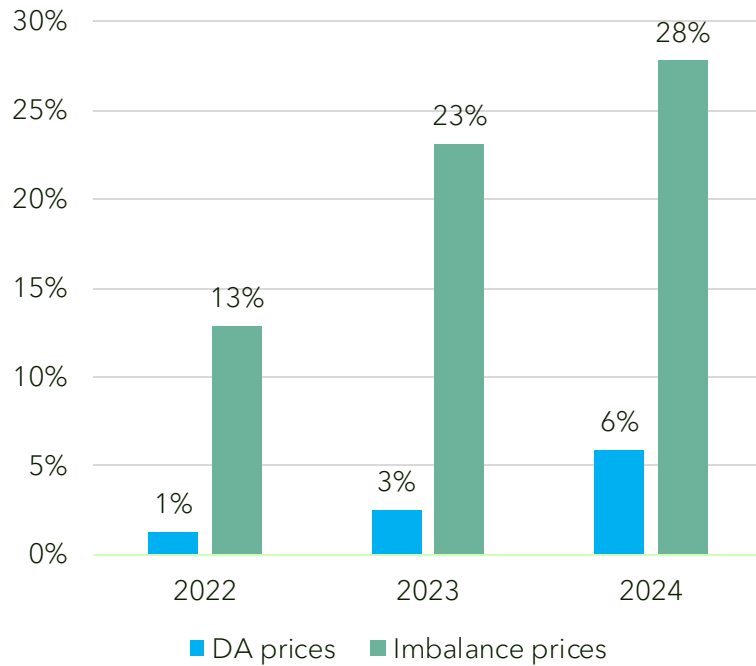
MARKET RISK MITIGATION METHODS

15.10.2024

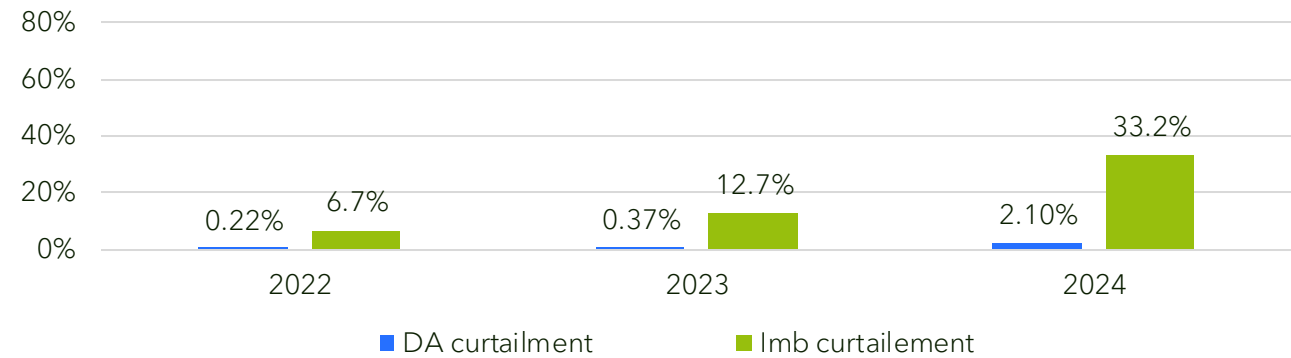
PRODUCERS CAN IMPROVE CAPTURE RATE AND IMBALANCE DISCOUNT SIGNIFICANTLY BY STEERING ON NEGATIVE PRICES



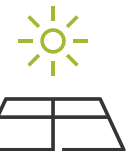
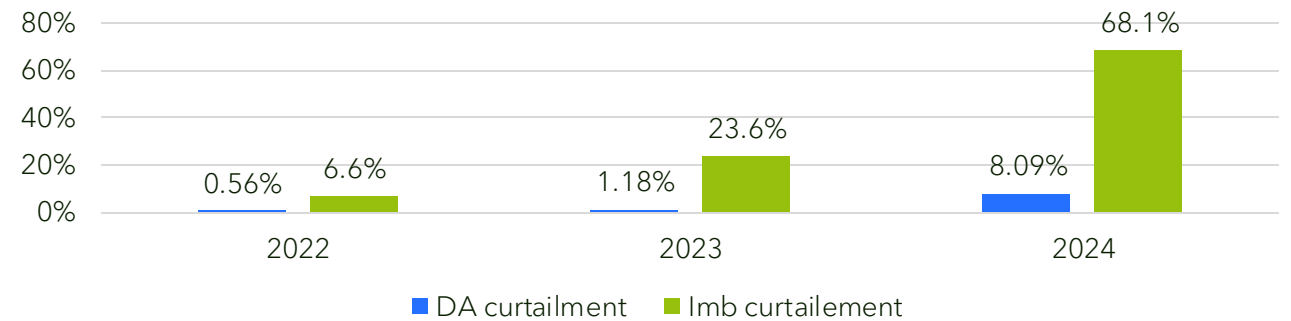
Negative price in the Belgian market



Flexible wind onshore - discount improvement



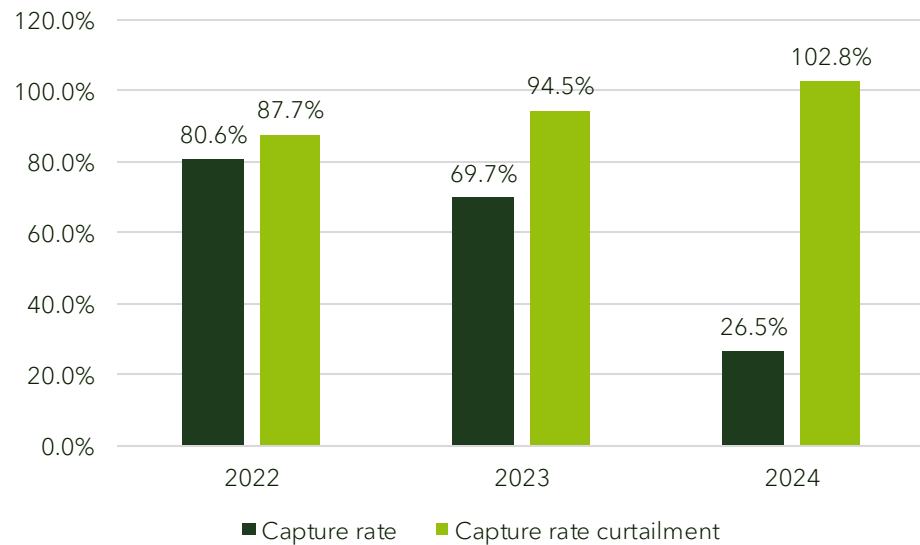
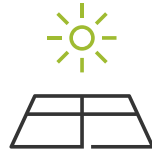
Flexible solar curtailment - discount improvement



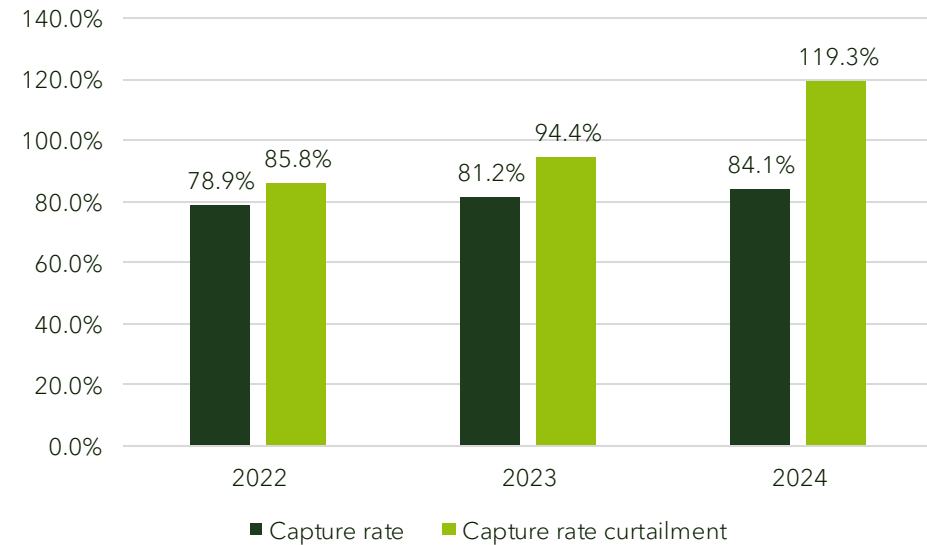
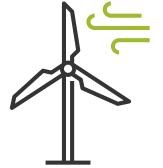
PRODUCERS CAN IMPROVE CAPTURE VALUE SIGNIFICANTLY BY STEERING ON NEGATIVE PRICES



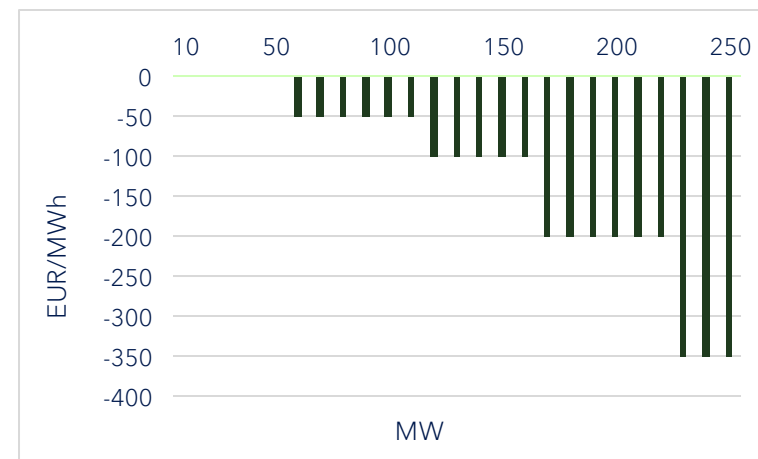
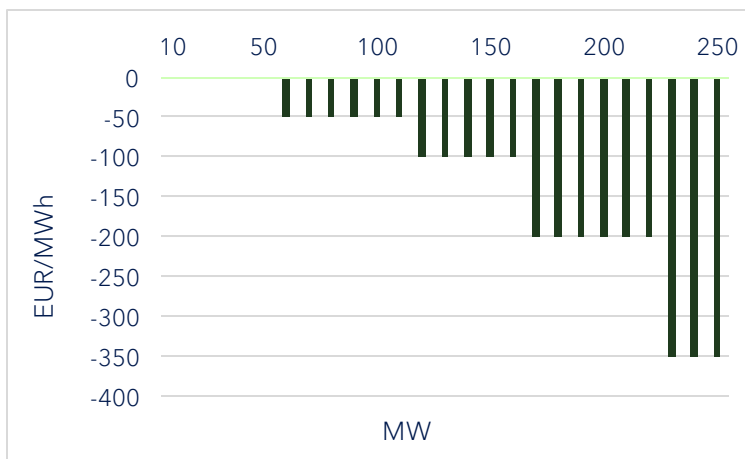
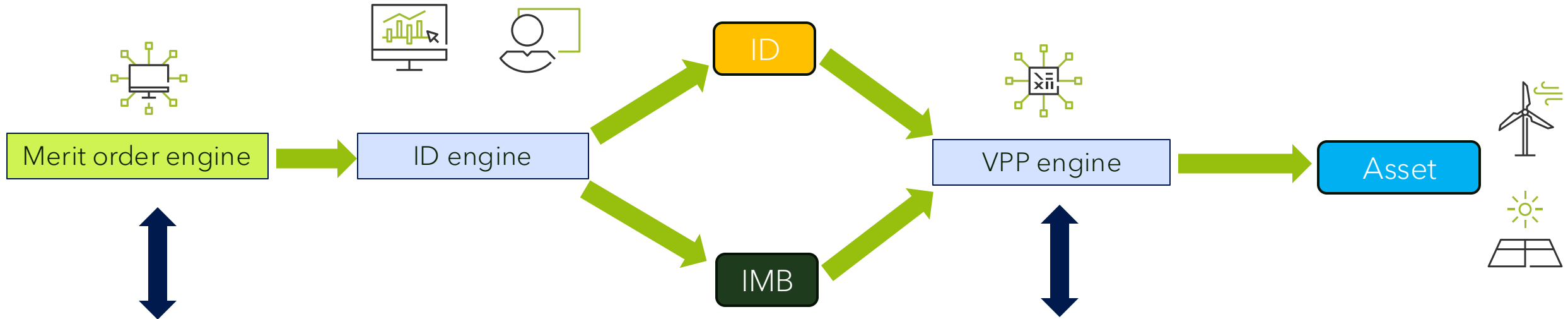
Belgian flexible solar – yearly capture rate



Belgian flexible wind – yearly and monthly capture rate



NEXT KRAFTWERKE HAS A POOL BASED APPROACH FOR ID/IMB CURTAILEMENT BASED ON THE STRIKE PRICE OF THE ASSETS





PART 4

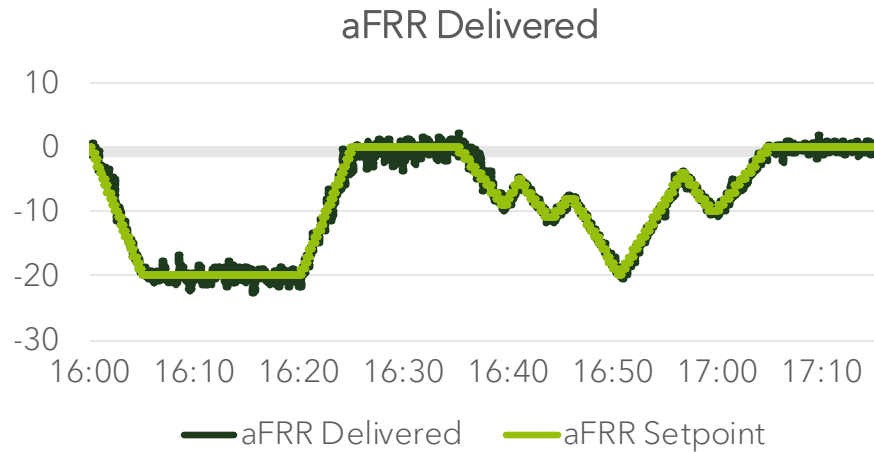
OPPORTUNITIES

15.10.2024

NEXT KRAFTWERKE PERSUES OTHER MARKET OPPORTUNITIES LIKE AFRR OR CONGESTION MANAGEMENT TO IMPROVE VALUE



aFRR down delivery with a wind farm



Congestion management

- Participation in Gopacs for ID congestion