



# From Prices to Value

Monetizing Volatility with a Flexible Portfolio



# Company structure TTEP Group



# Portfolio TTEP Group

## TTEP Italia | 4.6 GW

- 5 CCGT/OCGT
- 3 Biomass
- 3 BESS

## TTEP Netherlands | 2.6 GW

- 4 CCGT/OCGT
- 1 BESS

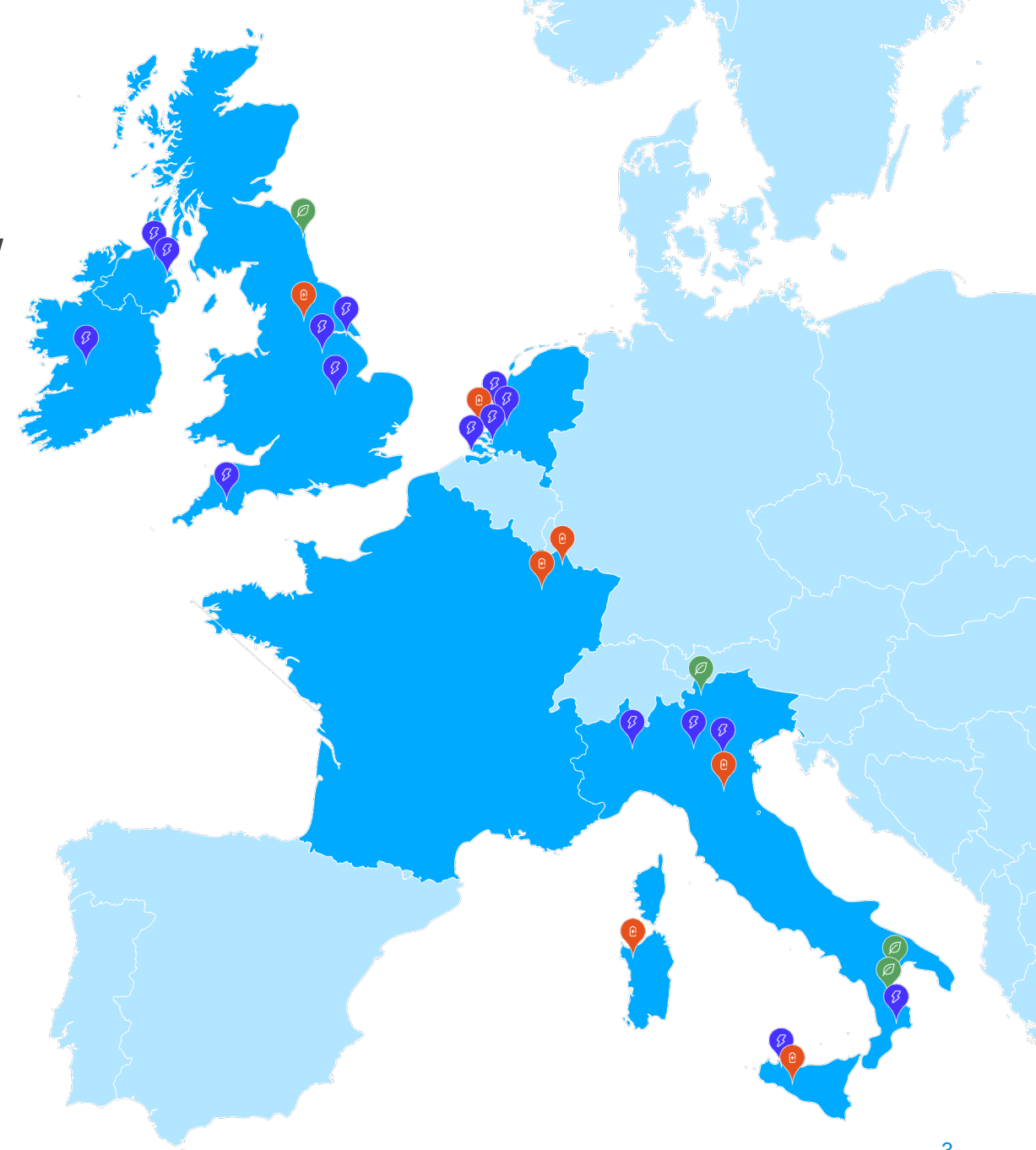
## TTEP UK | 6.8 GW

- 7 CCGT/OCGT
- 1 Biomass
- 1 BESS

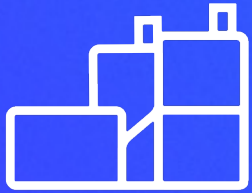
## TTEP France

- 2 BESS

-  CCGT / OCGT
-  BESS
-  Biomass



# Business Pillars



## Production

### Efficient, Flexible Energy Generation

- ✓ Sloe centrale (COD 2009, 936MW)
- ✓ Rijnmond 1 (COD 2004, 737MW)
- ✓ Rijnmond 2 (COD 2010, 419MW)
- ✓ Enecogen (COD 2011, 928MW)



## Energy Markets & Asset Optimisation

### Active in Markets for Power, Gas & CO<sub>2</sub>

- ✓ Short term trading
- ✓ Assets optimization
- ✓ Origination and structuring



## Supply

### Customised products & energy for B2B

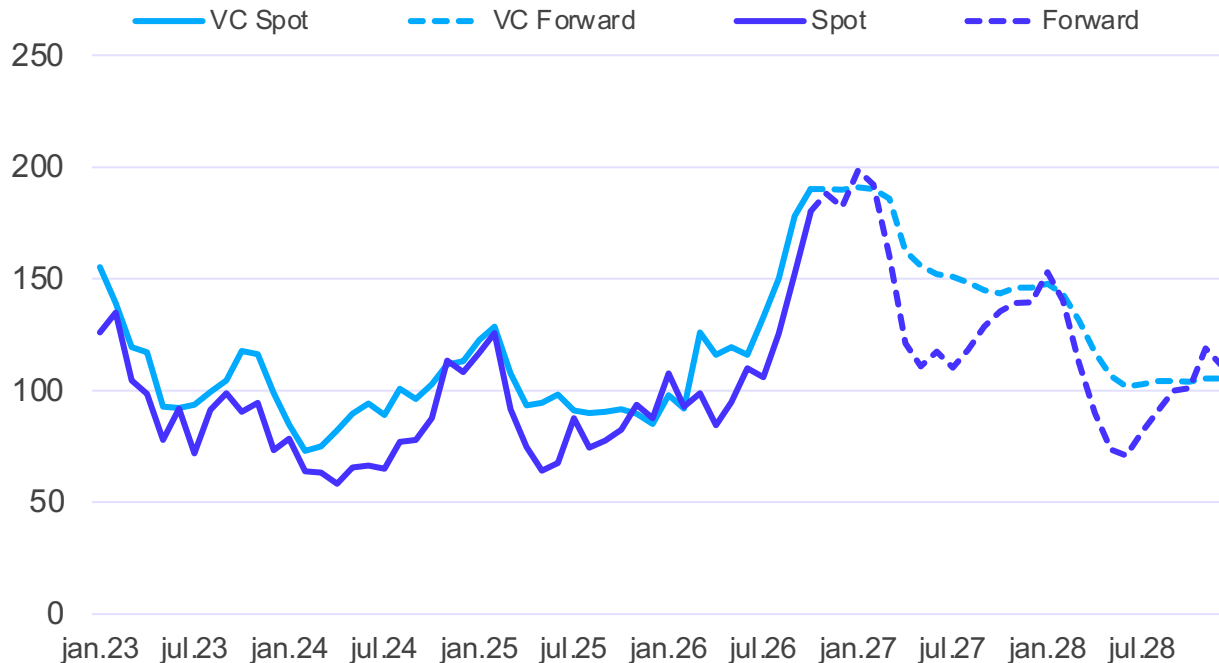
- ✓ #5 player in the market
- ✓ Drive business growth
- ✓ Explore organic growth vs. acquisitions

# Clean spark spread indicates earning potential

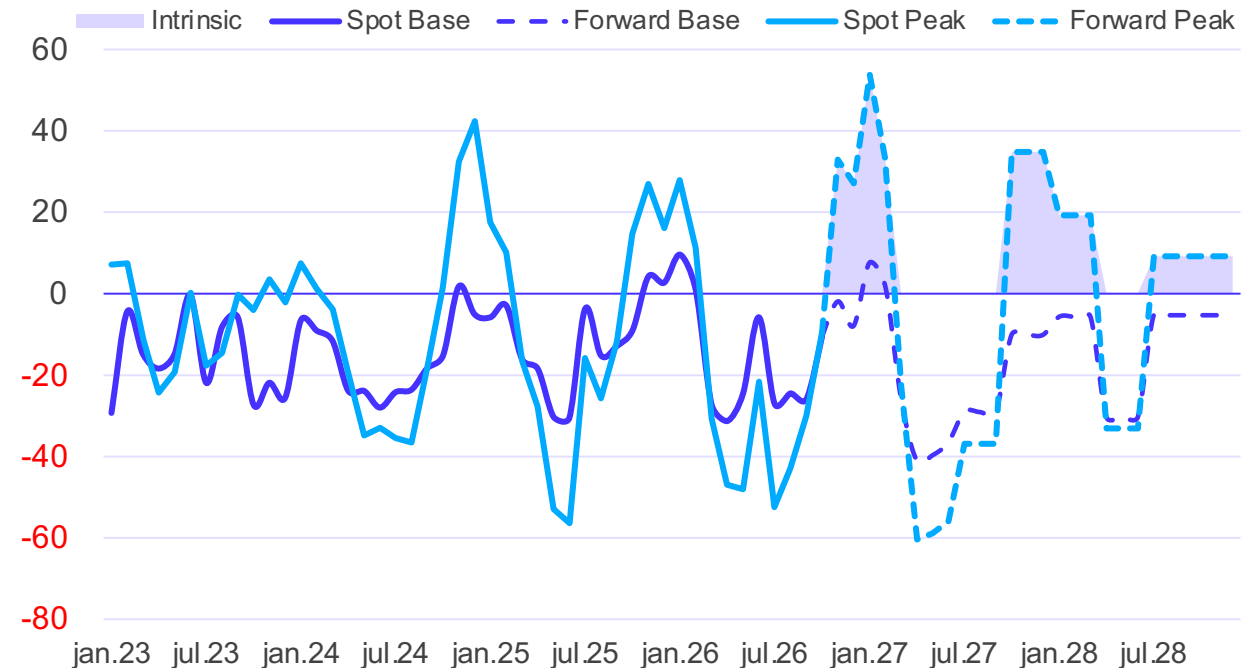
## Winter peak contracts are a key value driver for CCGTs

- Gas-fired plants are a key price-setting technology, so power prices track their variable costs.
- Higher gas prices lifted spot and forward power prices. The forward curve is now in strong backwardation.
- **Clean spark spread (CSS)** indicates the potential profitability of a gas-fired power plant.
- More renewable generation has pushed **baseload CSS below zero**.
- Peak CSS is increasingly volatile and **strongly positive in winter**.
- Winter peak CSS trades **above 20 €/MWh**. An efficient CCGT could secure **around 45 €/kW/yr** through a '27 forward hedge.

Electricity price and gas plant costs (EUR/MWh)



Spot and forward CSS (EUR/MWh)

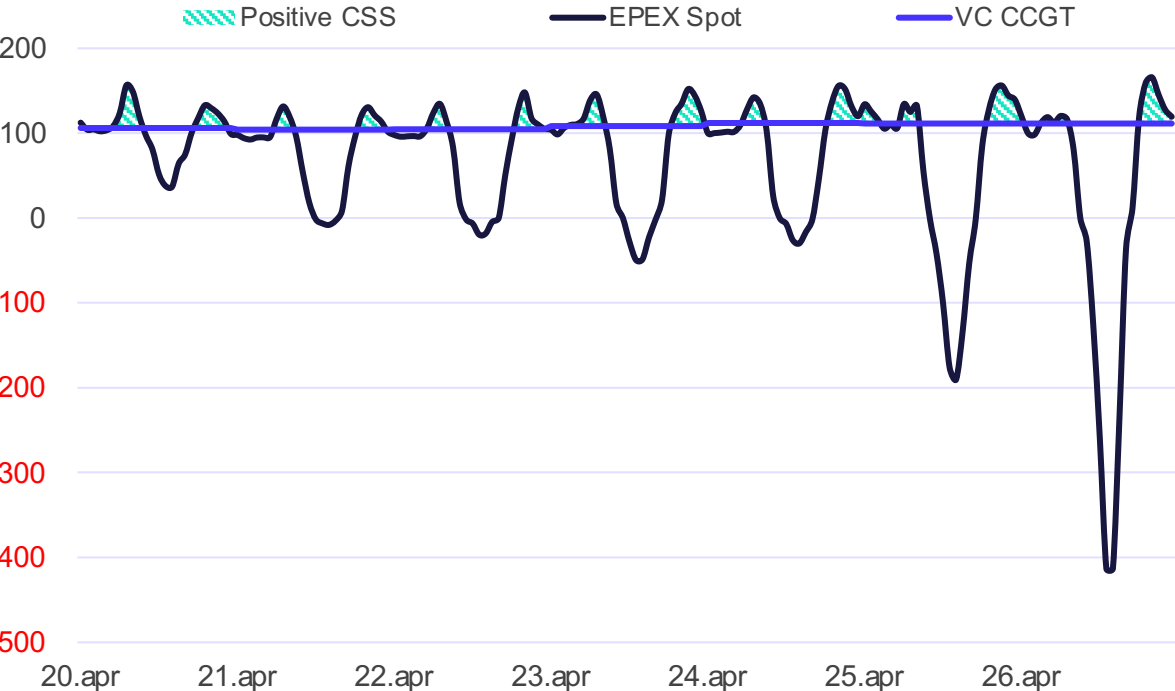


# Gas plants as options when CSS is positive

## A better indicator of earning potential

- Positive CSS hours give a better picture of market revenue
- Realised income will be lower due to:
  - Start-up costs & operational constraints
  - Variable maintenance costs
  - Lower availabilities
- CCGT utilization is gradually increasing

EPEX Spot and gas plant costs (EUR/MWh)

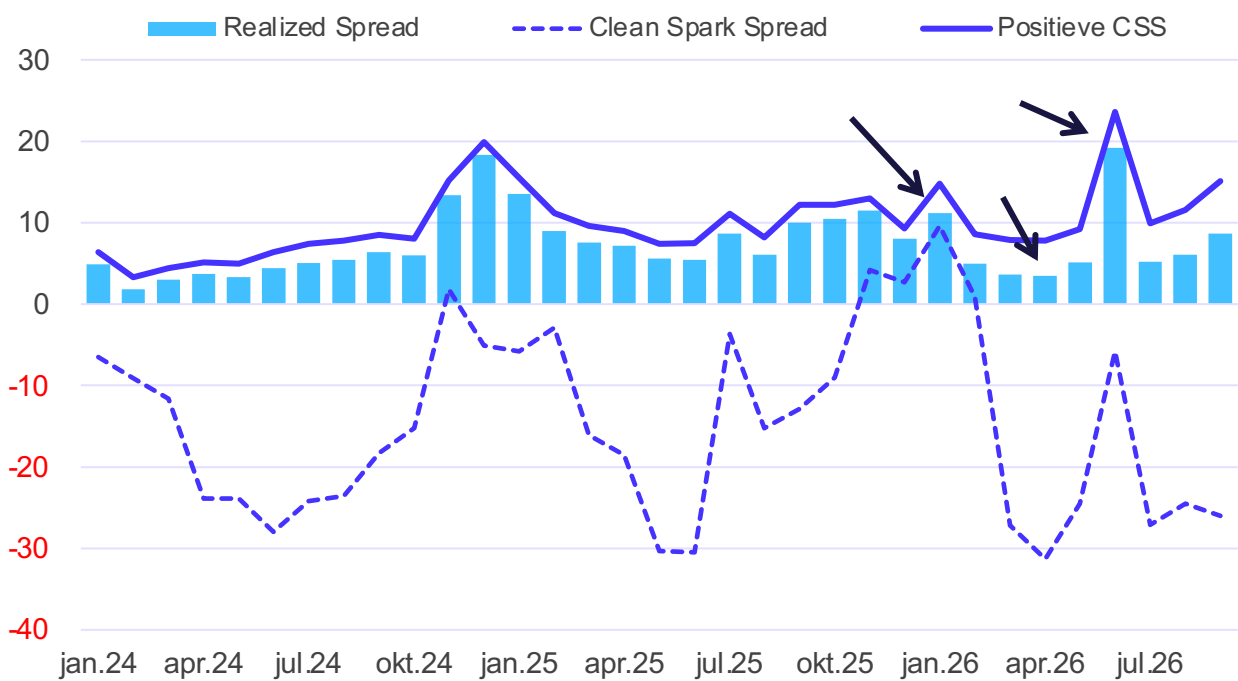


Indicative CCGT revenues

| CSS              | 2024  | 2025  | 2026  |
|------------------|-------|-------|-------|
| Base (€/MWh)     | -15.6 | -11.5 | -17.3 |
| Positive (€/MWh) | 8.1   | 10.5  | 12.1  |

*\* Historic CCGT optimization assuming 100% availability and 57 percent efficient*

Gas plant spot market revenue (EUR/MWh)

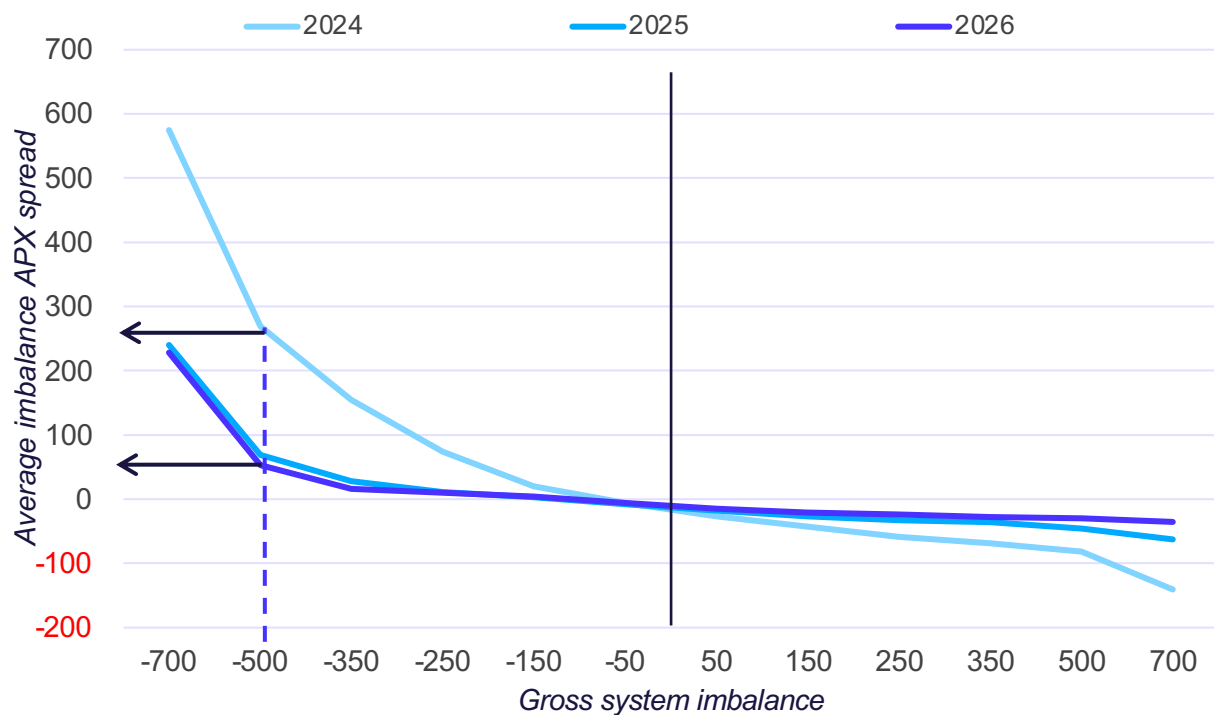


# Imbalance grows, but price volatility falls

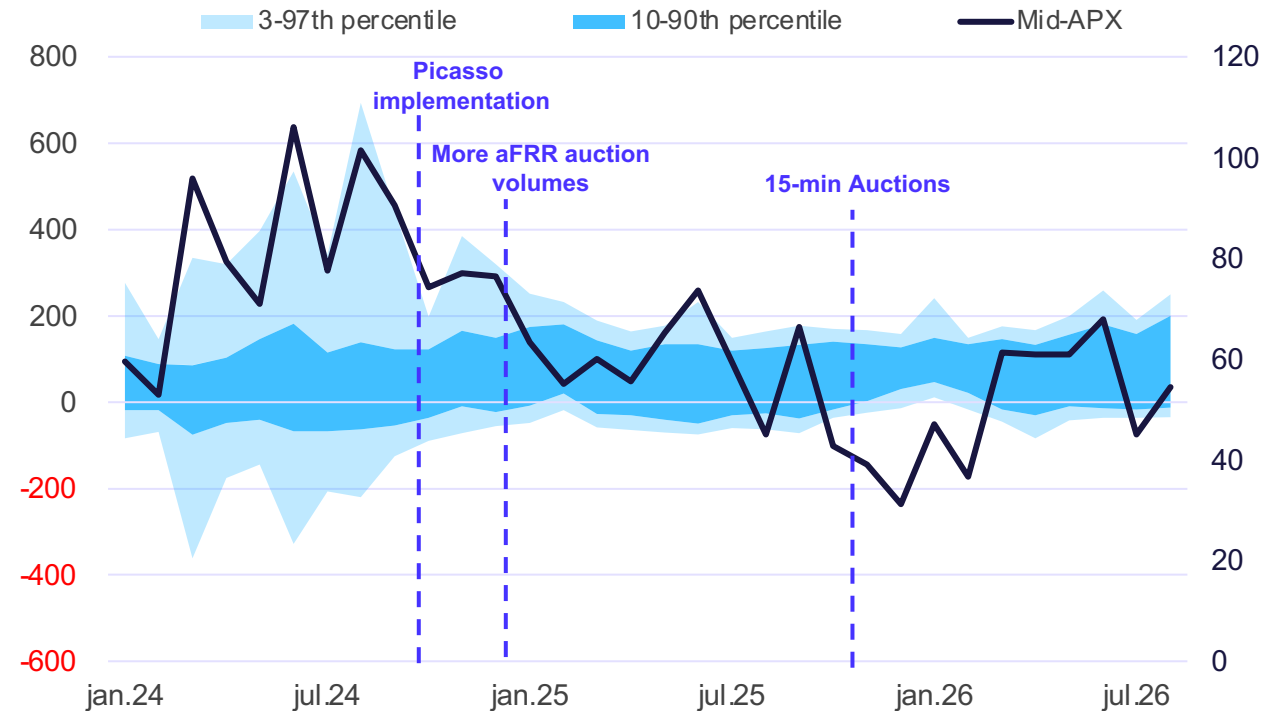
Price extremes are less frequent, but still occur

- Mean absolute gross imbalance rose from **193 MW in 2024 to 243 MW in 2026 YTD**.
- PICASSO unlocked more competitive supply. With the system 500 MW short, the IMB premium over EPEX fell from **269 EUR/MWh in 2024 to 53 EUR/MWh in 2026**.
- PICASSO (Nov 2024), higher aFRR capacity procurement (Jan 2025) and 15-minute day-ahead trading (Oct 2025) helped reduce price volatility.

IMB price response to gross imbalance (EUR/MWh)



IMB price distribution and Mid-Apx spread (EUR/MWh)

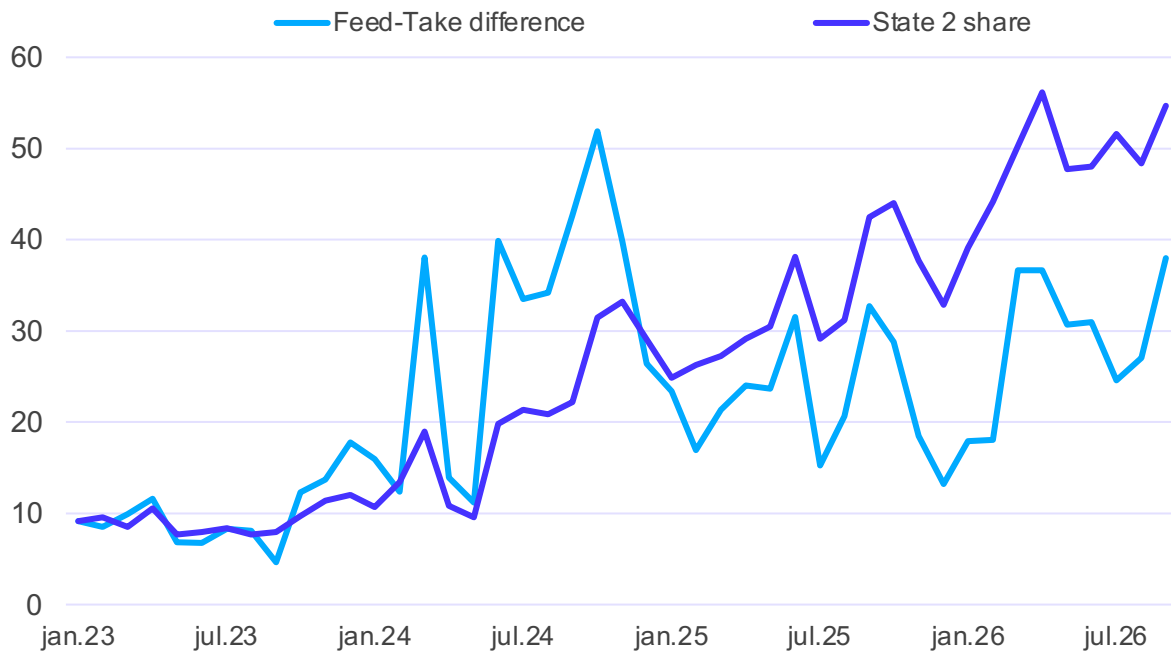


# State 2 and less volatility makes imbalance market less interesting

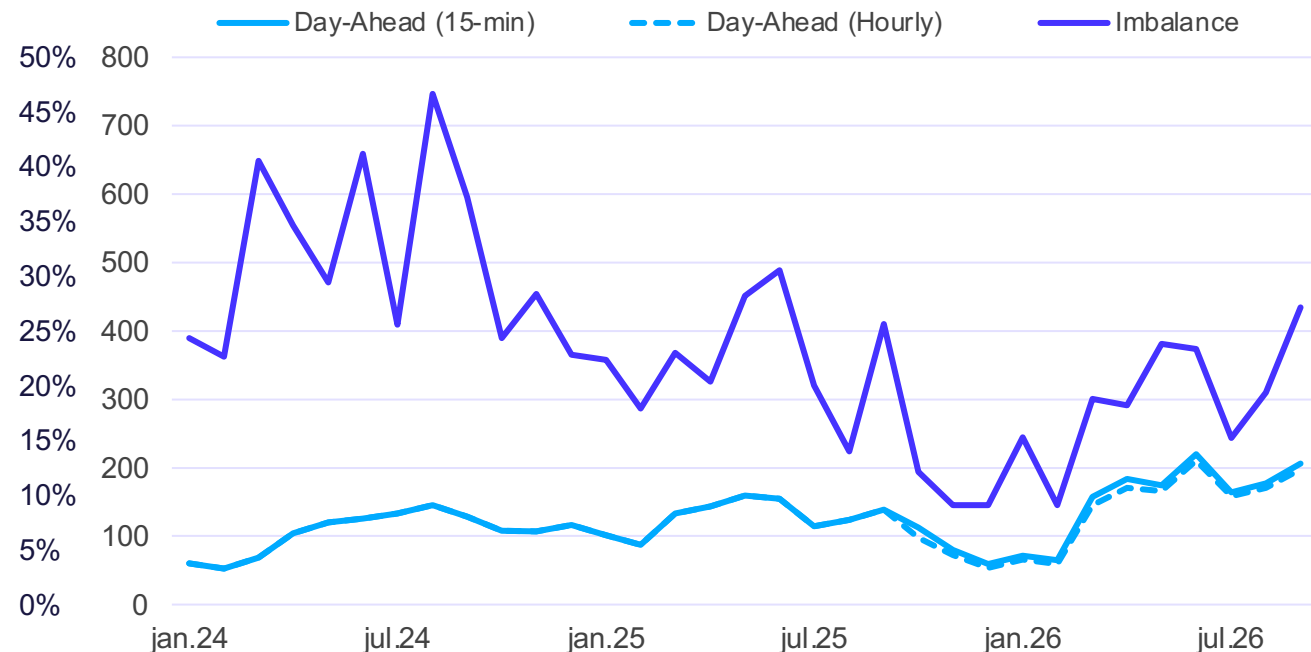
## More within-day shaping value shifts to the day-ahead market

- **State 2** combines priced up- and down-regulation within one PTU. Its share rose from **16.5% in 2024** to **38% in 2026**.
- The feed-take spread during state 2 fell, but more frequent state 2 periods kept the average spread **around 30 EUR/MWh**.
- Parties with portfolio are less affected as they can net positions within their portfolio.
- Passive imbalance steering with flexible assets (CCGT, BESS) earned a premium in 2024.
- Two-hour imbalance and day-ahead spreads are now converging, shifting more shaping value to day-ahead trading.
- Lower value and high (state 2) risk shifts shaping value to day-ahead (and intraday) markets.

### State 2 occurrence and average feed-take spread



### Highest daily 2-hour time spreads (EUR/MWh)



# aFRR capacity prices ease despite firm gas prices

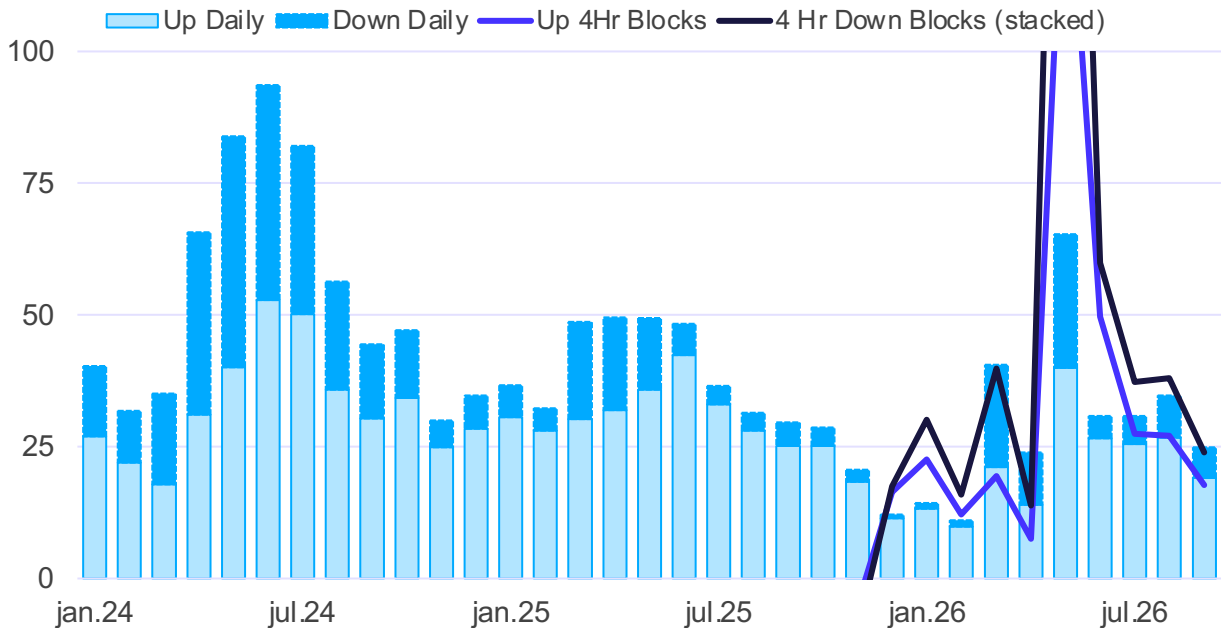
## BESS growth could bring Dutch prices closer to German levels

- **aFRR capacity prices are declining**, but higher gas prices provide support this summer.
- TenneT began four-hour procurement in November 2025. Its share has risen to **70% of capacity** this week.
- Four-hour blocks initially cleared at a premium, but **prices now appear to have converged**.
- As the market matures and BESS capacity grows, Dutch prices **could move closer to German levels**.
- CCGT shadow costs generally exceed those of BESS. **aFRR remains attractive for BESS** in cross-market optimization.

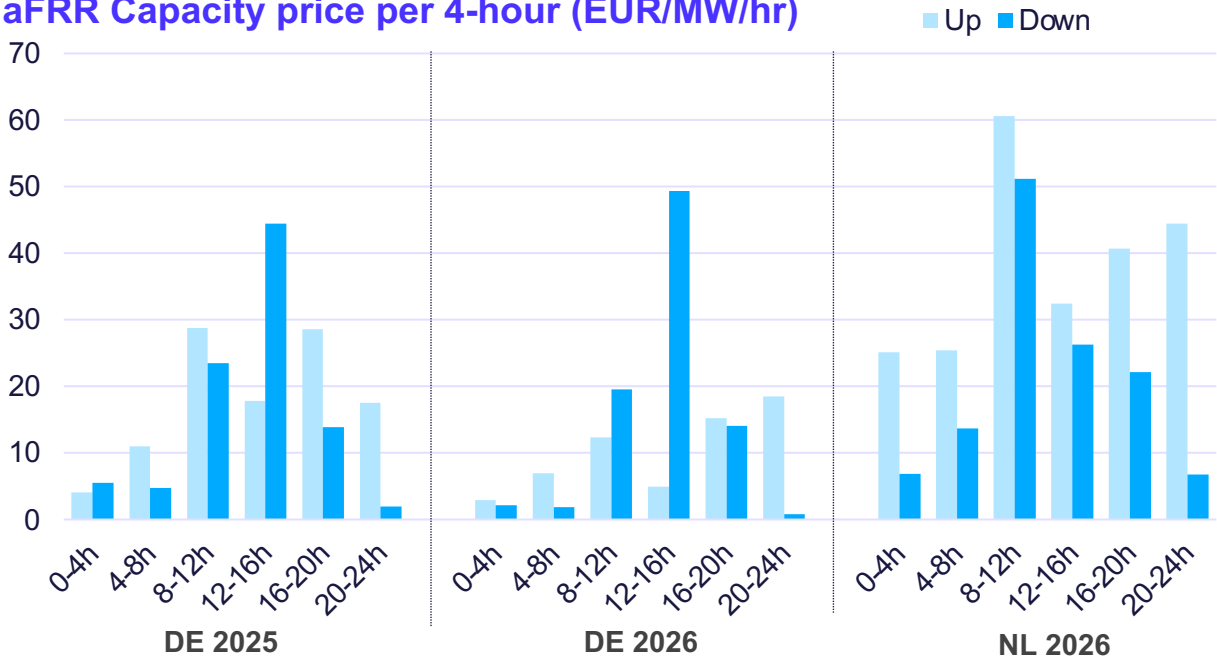
Average aFRR capacity fees

| aFRR                    | 2024 | 2025 | 2026 |
|-------------------------|------|------|------|
| Down Daily (€/MWh)      | 20.9 | 7.0  | 9.3  |
| Up Daily (€/MWh)        | 32.9 | 28.3 | 22.1 |
| Down 4 hr Block (€/MWh) |      |      | 21.1 |
| Up 4 hr Block (€/MWh)   |      |      | 38.1 |

aFRR capacity prices (EUR/MW/hr)



aFRR Capacity price per 4-hour (EUR/MW/hr)

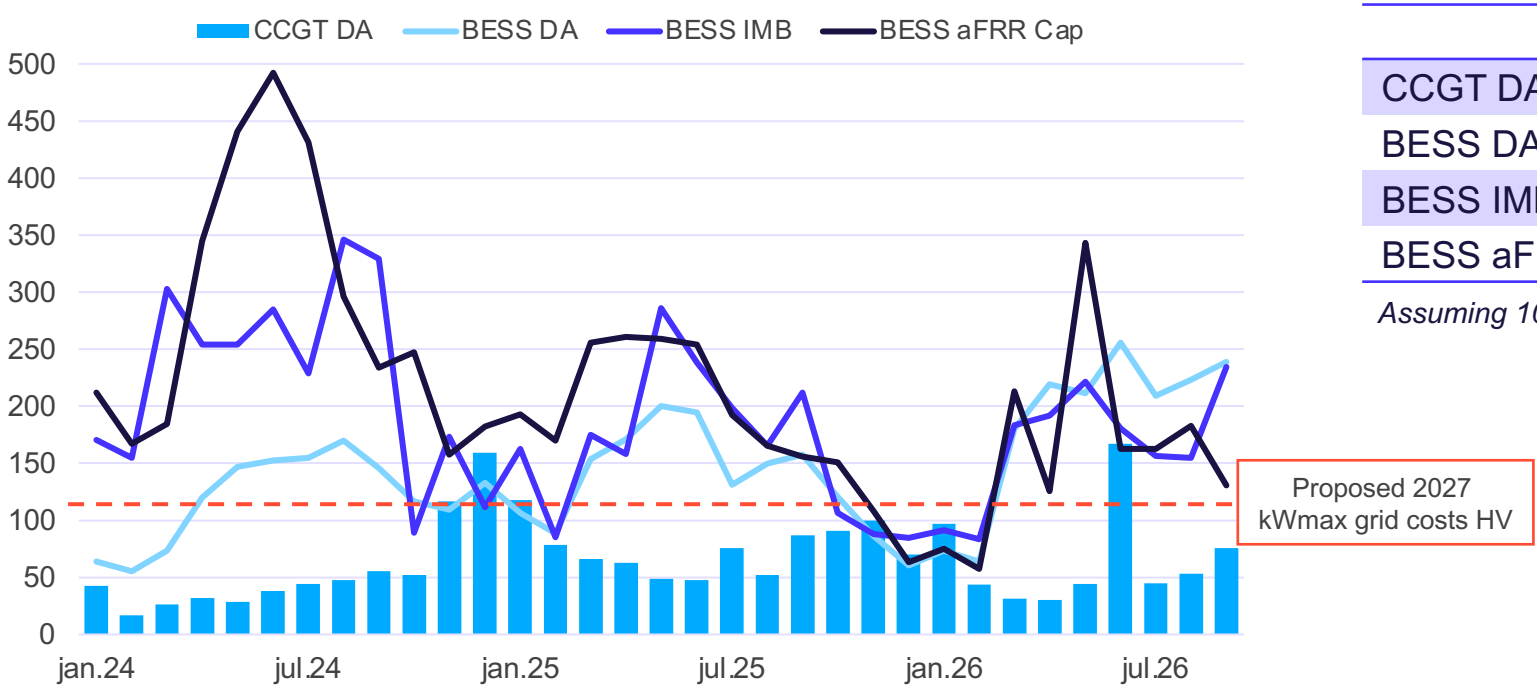


# CCGT and BESS value varies by market and season

## BESS may struggle to recover variable grid costs during winter

- **CCGT:** Large assets derive most of their value from the day-ahead market.
- **BESS:** Switching between markets and optimising across them is important.
- **aFRR:** BESS can earn additional income from energy bids and effective state-of-charge management.
- **Intraday shaping:** More and larger BESS increase its importance in the day-ahead market, where BESS and CCGT compete for value.
- **Summer:** BESS stores surplus solar generation for evening demand, reducing gas plant running hours.
- **Winter:** Lower renewable output supports higher, more stable CSS for CCGT. BESS may struggle to recover rising grid costs.

Indicative per market (€/kW/Yr)



Indicative revenues per market

|                         | 2024 | 2025 | 2026 |
|-------------------------|------|------|------|
| CCGT DA (€/kW/Yr)       | 55   | 75   | 65   |
| BESS DA (€/kW/Yr)       | 120  | 135  | 186  |
| BESS IMB (€/kW/Yr)      | 225  | 163  | 166  |
| BESS aFRR Cap (€/kW/Yr) | 283  | 186  | 161  |

Assuming 100% availability, 2026 until September



**TTEP**

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