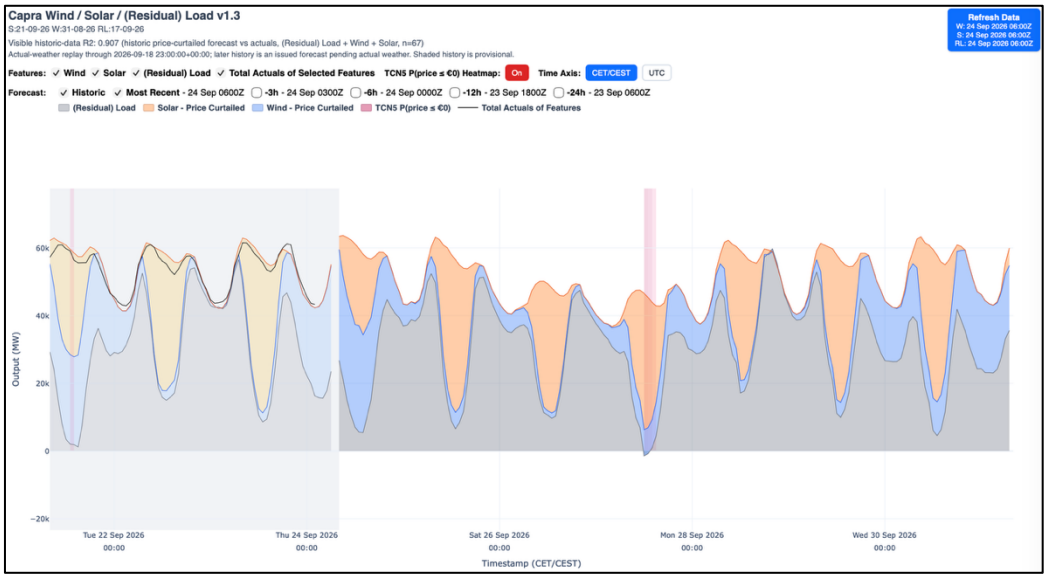
Forecasting the German Power Market with Confidence

- ☑ **See the fundamentals –** wind, solar, demand and residual load
- ☑ **Understand the price risks –** negative-price and price-spike probabilities
- ☑ **Forecast the outcome –** expected hourly day-ahead power prices and uncertainty ranges
- ☑ **Track what is changing –** compare successive forecasts as weather and market conditions evolve

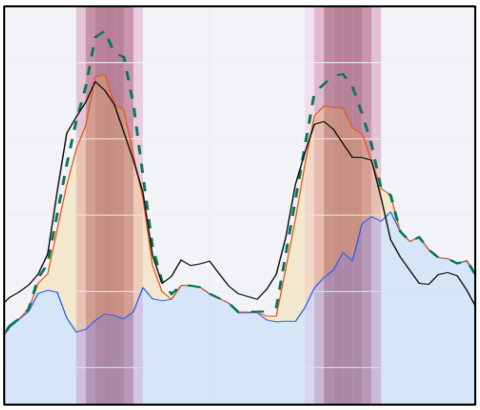
☑ **168-hour forecast horizon**

☑ **Updated every three hours**

Forecast the Key Drivers of German Power Prices – Wind, Solar, Demand and Residual Load



RES Production Potential, Economic Curtailment and Negative Price Risk



Key Drivers and Commercial Challenge

Wind and solar generation have become critical sources of variability in spot power markets. In the past, the outage of a few 500 MW thermal units was a major market event; today, variable RES generation can change by 10 GW or more from day to day and from one weather forecast to the next. Yet, predicting potential wind and solar output is no longer sufficient. Grid-enforced curtailment and commercial curtailment driven by negative prices are becoming increasingly important considerations.

The third major element to understand spot market conditions is load and residual load (load less wind less solar). Residual load is a key determinant of market price. It is also a critical component in identifying system tightness or surplus and thereby price levels and volatility.

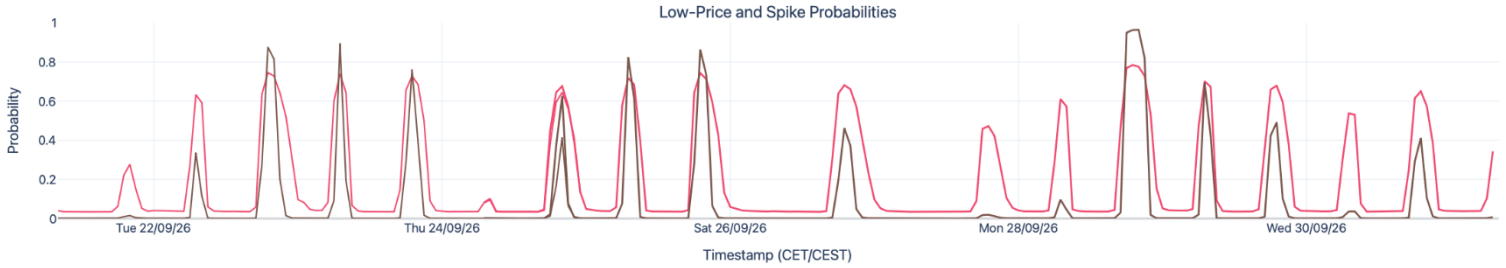
Capra Tensor Platform Delivery

To meet the commercial challenge, we developed proprietary forecasting models specifically for electricity markets. These advanced models forecast renewable generation potential and expected output, accounting for the effects of grid constraints and economic curtailment.

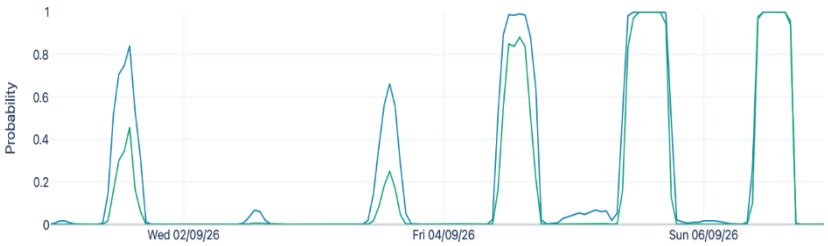
Updated every three hours using the latest available data, our forecasts provide timely insight to support better-informed commercial decisions.

Identify Price Event Probabilities Before They Materialise

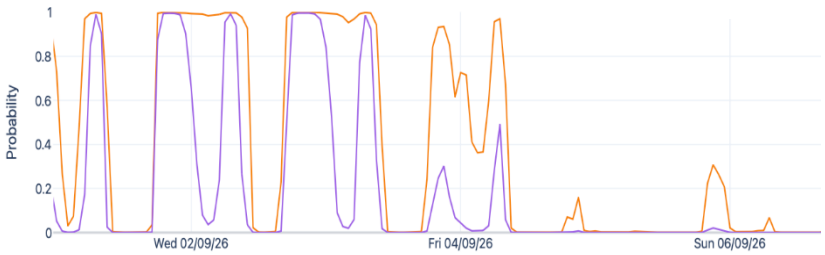
High-Price Probabilities (P > 200 EUR/MWh / P > OCGT Marginal Cost)



Low-Price Probabilities (P <= 10 / P <= 0 EUR/MWh)



Mid-Range Probabilities (P > CCGT MC / P > Coal MC)



Commercial Challenge

The frequency of zero or negative prices has increased in the German power market to a level that can no longer be ignored.

Period	Total Hours	Hours <= 0	Share
2020	8,784	302	3.44%
2021	8,760	146	1.67%
2022	8,760	75	0.86%
2023	8,760	325	3.71%
2024	8,784	496	5.65%
2025	8,760	502	5.73%
H1 2026	4,343	222	5.11%

With more than 5% of hours settling at or below zero, anticipating when these events are likely to occur is commercially critical for short-term operations: trade positioning, BESS optimisation, maintenance planning or renewable curtailment.

Capra Tensor Platform Delivery

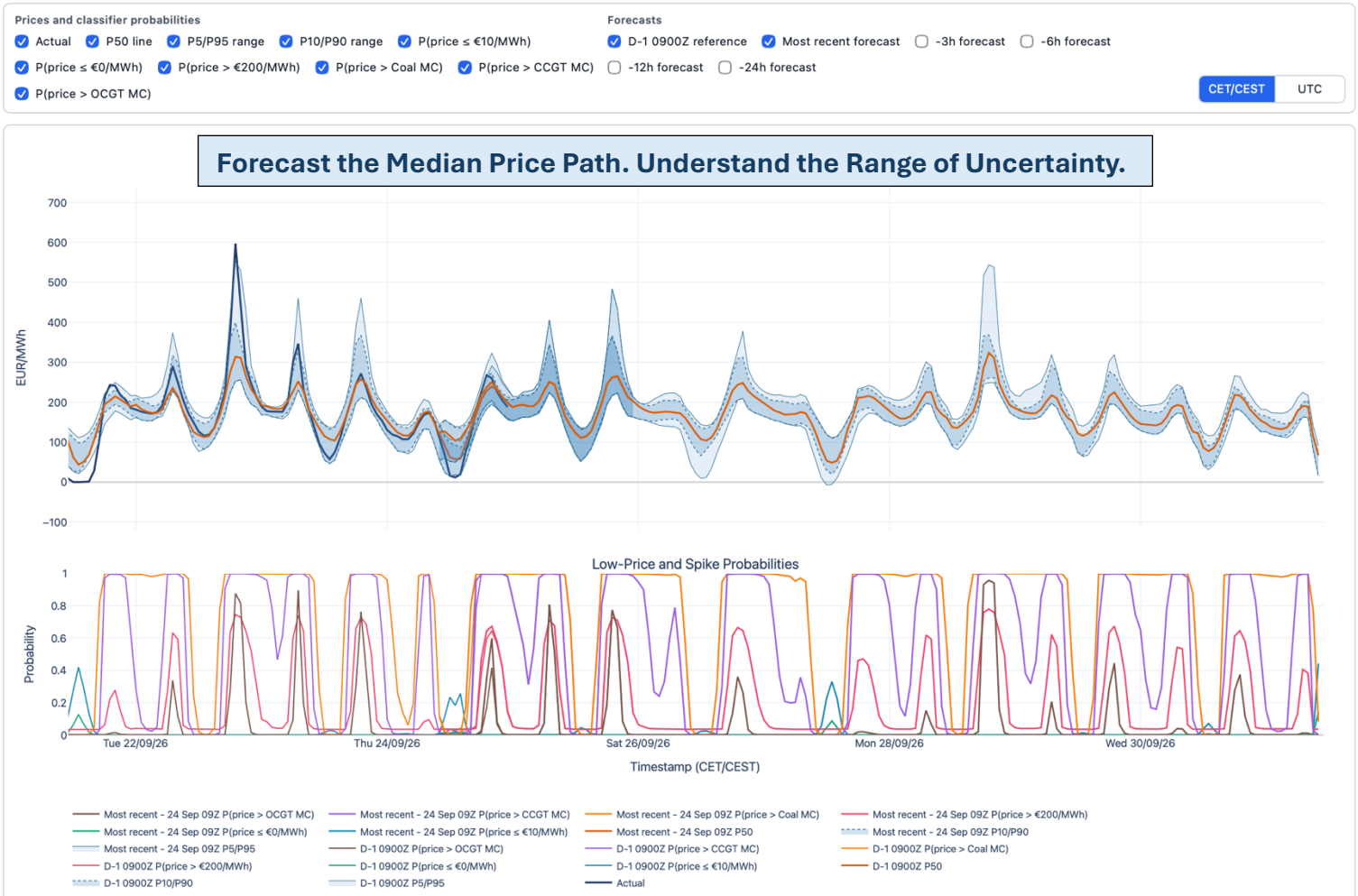
Event-probability forecasts complement the central price forecast by showing the likelihood of commercially significant price outcomes, including negative prices, price spikes and prices exceeding standardised generation-cost benchmarks.

The Capra Tensor suite of models helps to create a deep and multi-faceted understanding of power market dynamics.

We combine market knowledge with advanced data modelling to maximise commercial value for our users.

Seven-Day Power Price Forecasting – Germany

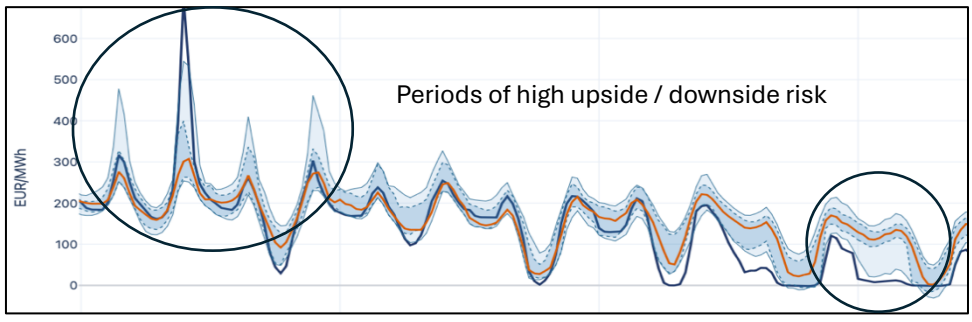
German power prices can change rapidly as renewable generation, demand, trade flows and overall system conditions evolve. Capra Tensor brings these market drivers together to forecast the resulting electricity price for every hour of the seven-day horizon, supporting earlier, better-informed commercial decisions.



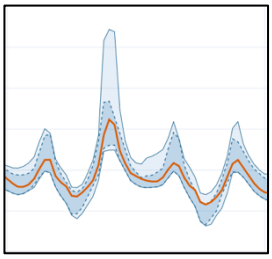
The Spot Price Model

Our model suite culminates in the spot price model. We present the price forecast at five percentile levels: P5, P10, P50, P90 and P95. The percentile bands show the forecast range for each hour, helping users identify periods of greater upside or downside uncertainty.

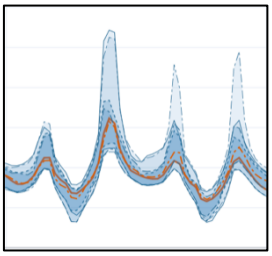
Across all models, users can zoom, pan or (de-)select output and compare current with previous forecasts and actuals.



Forecast at t



...t and t-24 overlaid



Why Capra Tensor

☑ **Independent Insight for Electricity Markets**
Purpose-built proprietary models designed using decades of electricity market experience.

☑ **Updated Every Three Hours**
Fresh forecasts generated from the latest data.

☑ **Multiple 168-Hour Forecasts. One Platform.**

- Renewable generation
- Negative-price, price-spike and generation-cost threshold probabilities
- Residual load
- Day-ahead power prices

☑ **Flexible Delivery Solutions**
You can use our standard web-based platform and input data or integrate our models into your operational systems using proprietary inputs.

☑ **Built for Commercial Decisions**
Helping traders and asset operators:

- Anticipate market conditions
- Reduce forecasting uncertainty
- Capture commercial opportunities

Designed for power markets and built to evolve

Capra Renewables

Energy Market Intelligence
Data-Driven Analytics, Forecasting, Advisory, and Networking

Our Philosophy

Better decisions come from better information. Our focus is on delivering clear, independent and practical electricity market intelligence.

Our Focus

High-quality data, robust analytics and deep market expertise enable us to transform complex data into actionable insight.

Proven Performance

Objective forecast validation and continuous improvement underpin every intelligence product.

Request a Demonstration

Discover how the Capra Tensor platform can help your business reduce uncertainty and improve commercial outcomes.

curators@caprarenewables.com

caprarenewables.com

Better commercial decisions with Capra Tensor