Optimizing trading strategies with data-driven decisions

Commercial & Forecast Optimization Service







The challenges to sustain green energy growth in extreme market dynamics

Unpredictable revenues from the wholesale energy market, combined with rising imbalance costs are among the challenges faced by renewable energy players in the post-subsidy world. As economic recovery is under way wholesale energy prices have been rising steadily. In the last few weeks they reached record highs in Europe. Since the start of September they have climbed steadily by +36% in France; +48% in Germany and prices reaching 500 EUR/MWh in Britain. This surge is explained by multiple factors, such as issues with gas supply, increased demand for LNG and coal, as well as increased prices of CO2 emissions and intermittent renewable generation.

The fact is that market participants are facing huge price volatility. All these factors have a significant impact on the growing costs and return on investment (ROI) predictability.

Boosting the value of each MWh with TokWise solution

To support green power producers in the transition phase, technology company TokWise has developed a solution that can maximise the profits of renewable energy generators. The tailor-made Commercial and Forecast (C&F) Optimization Service is designed to increase the value of each MWh of green power on the market.

The innovative solution combines big data and advanced analytics, offered as Software-as-a-Service. Leveraging resilient technology and proprietary Machine Learning (ML) based algorithms, TokWise is adding an extra intelligence layer to trading operations to reflect all market dynamics and minimise costs. As a result an optimised position is calculated to provide a higher P&L.



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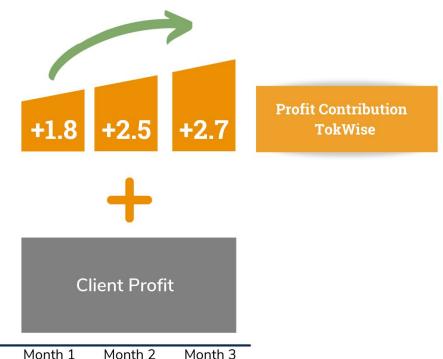
Success story from Germany

The C&F service has a good outreach in Europe, especially in Germany as one of the matured green markets. One of the success stories is the collaboration with a large green aggregator with more than 1,000 wind and solar farms and over 5 TWh of annual power generation.

The client was facing increasing imbalance costs and it looked for a way to hedge against spot market volatility.

TokWise's C&F Optimization Service boosted the net profit of the aggregator adding an extra EUR 1 per MWh. The improved results are achieved through effectively arbitraging between various energy markets. The C&F Service is based on big data processing through which the model calculates an optimised position to achieve the highest P&L.







The process beyond the numbers

The C&F Optimization Service is a next-generation trading strategy designed to accelerate renewable energy integration and the growing market complexity. The key characteristics outlining the service:

- Data-driven bidding strategies based on advanced data management architecture and
 Machine Learning algorithms to accurately capture the market and grid complexity
- Convert market volatility into additional revenue streams by proactive arbitraging
- Fully compatible with energy storage
- High level of customisation to adapt to unique market conditions and internal risk management policies
- API-based service where all technical constraints are managed by TokWise.

How it works

TokWise is a combination between resilient technology and a disruptive model which focuses on the value generated for each megawatt. The transparent commercial model is in alignment with this philosophy. The company shares the incentive and risk with the client as a partnership approach and is offering a non-binding pilot phase to prove value before the client decides for long-term commitment.

The API-based service ensures agile integration into the client's daily operations. The team is extremely tech oriented with deep knowledge in the domain and pioneers in the digitization of energy centric processes through AI.



Technology for sustainable energy

Maximize the value of green energy

About TokWise

<u>TokWise</u> is a technology driven company with innovative solutions to maximize the return of your renewable portfolio. Leveraging resilient technology and proprietary ML-based algorithms, TokWise is adding an extra intelligence layer to your trading operations to reflect all market dynamics and minimize your cost.

Supporting the growth of renewable energy by providing solid services to manage efficiently the green portfolio:

- ❖ Tailor-made Commercial and Forecast Optimization Service designed to optimize the trading and return of each MWh renewable energy delivered as API-service
- Software-as-a-Service Portfolio Management Suite to connect the assets and the market and orchestrate all activities from one single place.

