

> epexspot



Speedwell **Climate**

SUPPORTING THE
ENERGY TRANSITION
WITH NEW WIND
POWER INDICES



EPEX SPOT x Speedwell Climate Wind Power Index supporting the energy transition

For wind power producers, asset holders and investors, the EPEX SPOT x Speedwell Wind Power Index is a benchmark that reflects both wind and spot price fluctuations over a period of time (day, month, seasonal, etc.), so they can better manage their risk – ensuring stability of revenues, increased financing and development of renewables in the market.



Three Innovative Wind Power Indices

Quality Factor Index

The factor difference between the actual weighted price received and the baseload price

Achieved Price Index

The actual price received on a weighted basis per MWh

Achieved Revenue Index

The product of the hourly wind energy production and the weighted auction price

➤ These indices each help deal with the uncertainty of the captured price of a wind farm. The "Achieved Revenue" index, in particular, helps deal with volume generation risk.





Most reliable Day-Ahead reference price

Based on highly liquid Day-Ahead auction markets across Europe, gathering a large and very diverse community of market participants.

Strong expertise & success in benchmark indices creation

EPEX SPOT indices are already a benchmark today throughout the power industry. The success of our ID suite (IDFULL, ID3, ID1), for example, has allowed EPEX SPOT members to better market their offers and challenge their trading activity.

Market integrity & transparency

The EPEX SPOT Market Surveillance team ensures very high standards and expertise on daily spot market monitoring. Thanks to advanced tooling and rich economic expertise, Experts work to prevent market disruption, misleading or insider trading as well as manipulations, securing the EPEX SPOT price excellence.



Over 20 years of providing indices to the weather/climate/renewables risk transfer market

Founded in 1999, Speedwell Climate is the leading provider of data for index-based weather / climate / renewable risk contracts worldwide. Speedwell's renewable energy indices have been used in the OTC risk transfer market for over four years.

Unique data modelling

Generated output is modelled using gridded wind data derived from the ECMWF's ERA5 data. Modelled data overcomes the problem associated with metered data including reporting delays and errors and changing asset base. ERA 5 data is produced 7 days in arrears. As a result, Speedwell also calculates an estimate of the ERA5 data using forecasts. This allows mark to market/margin on a daily basis.



Index Calculation Methodology



Step 1: Collect Metadata

The location and characteristics of wind farms in the region of interest are determined and validated. Required details include accurate location, number of turbines, rating, hub height, power curves, and which grid the turbine is connected to.

Step 3: Apply Power Curves

Representative power curves are used for each wind turbine to derive theoretical hourly energy output. The resultant energy outputs are then aggregated for the required region.

Step 2: Wind Speed Calculation

Starting with the native 0.250 x 0.250 resolution of the ERA5 data, wind speed time series are computed for each turbine using interpolation

Step 4: Validate Results

Each index is analysed and compared against actual generation data. An optimisation process run to tune the theoretical energy output to observed official data over a relevant period. The optimisation process and parameters are then frozen.

Step 5: Index combined with EPEX SPOT hourly price data

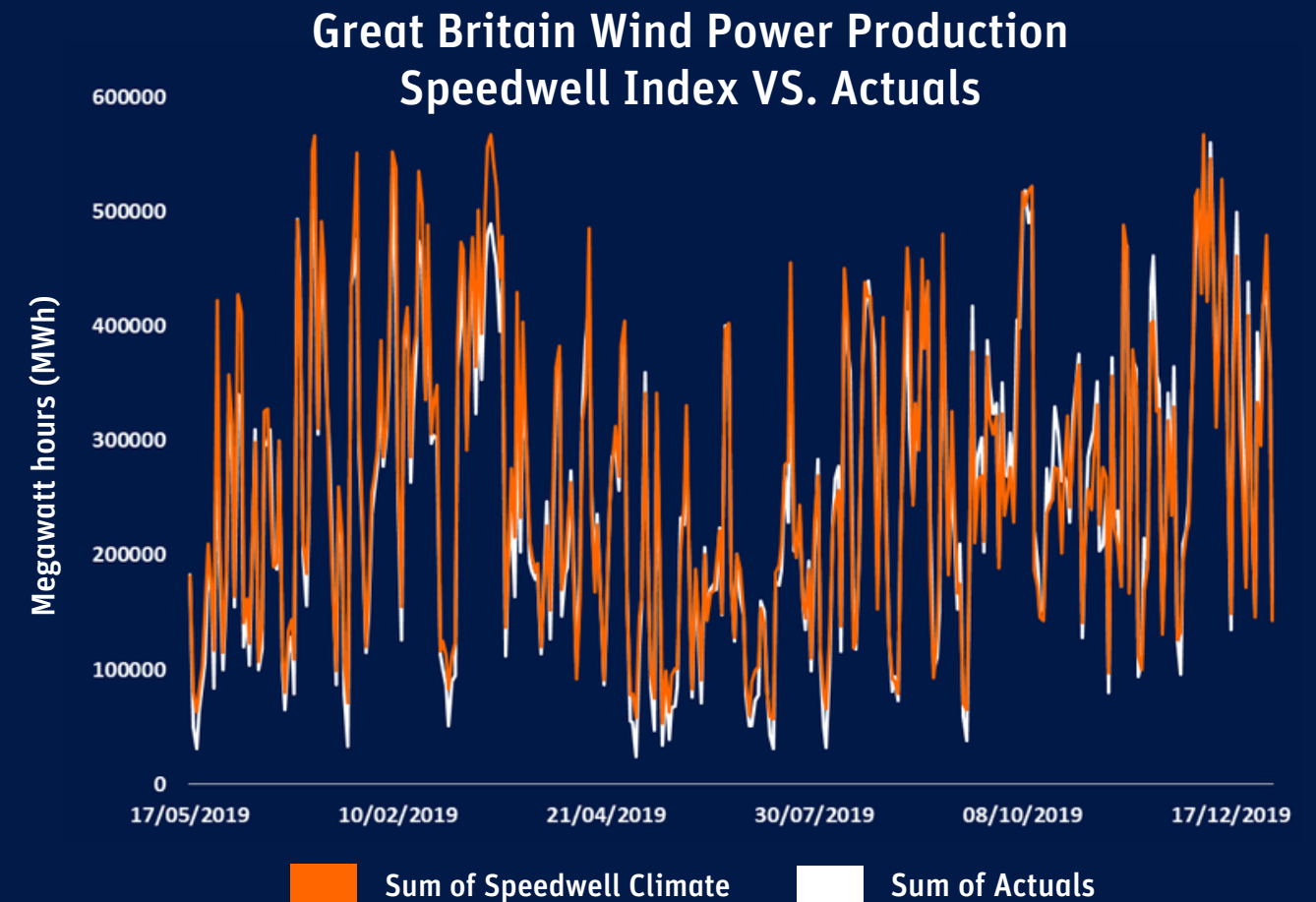
Following each EPEX SPOT Day-Ahead power spot auction, hourly prices are combined with the Speedwell theoretical hourly wind energy output. The specific combination of market price data and modelled volume data results in the different Wind Power Indices.

Wind Modelling Performance

The underlying Speedwell wind generation data are designed to model theoretical wind power production (MWh).

The chart represents the Speedwell wind index (orange) vs. the wind production (white).

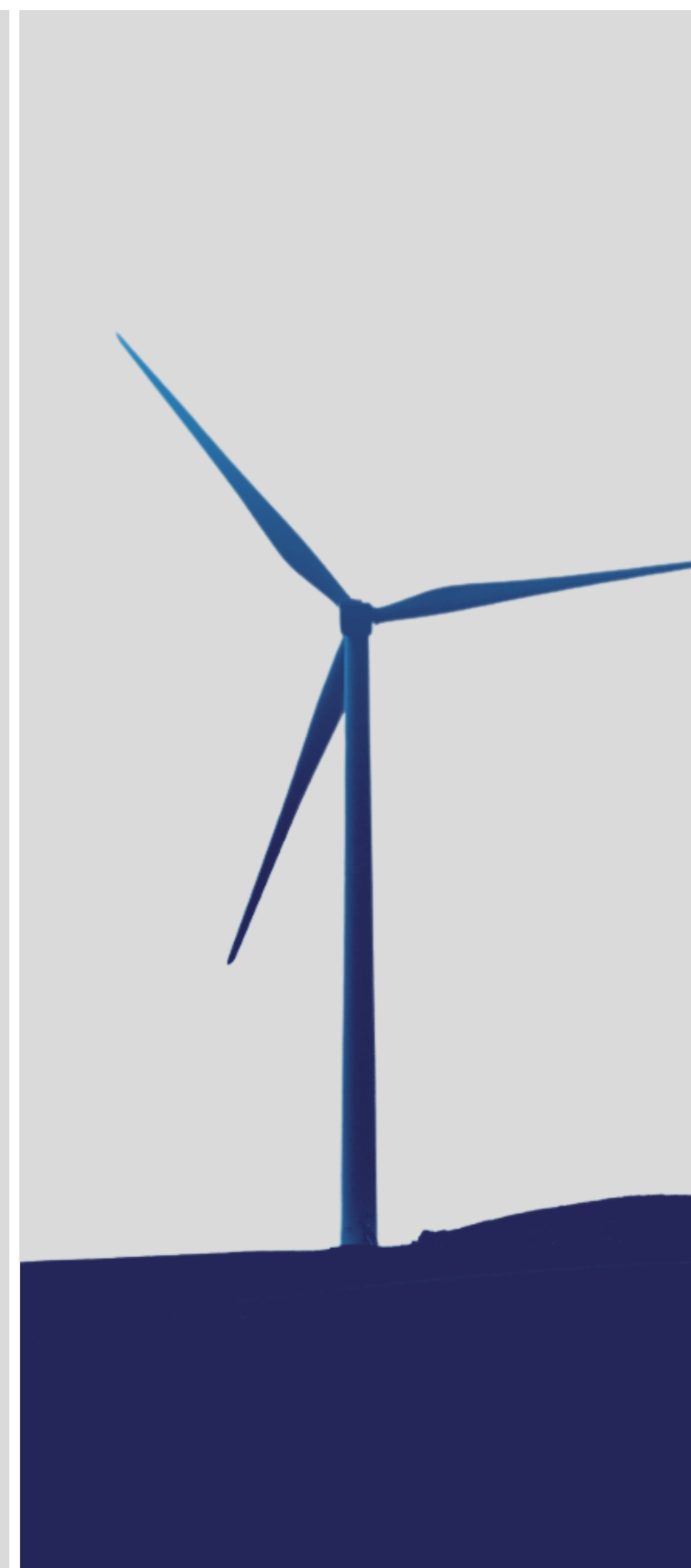
The chart displays daily MWh production for the United Kingdom over a 6-month period. The R2 value for this relationship is 0.953.



Product Specifications

Benchmarks for Quality Factor, Achieved Price and Achieved Revenue indices are available for the following underlying GB wind asset baskets for Baseload:

GREAT BRITAIN	STANDARD PERIODS	TAILORED PERIODS
All / Offshore / Onshore	Days / Weeks / Months / Quarters / Seasons	Any non-standard period can be provided upon request





Interested in our offer?

Get in touch with the experts:

info@speedwellclimate.com / marketdata.sales@epexspot.com



Or register to
our webinar!

