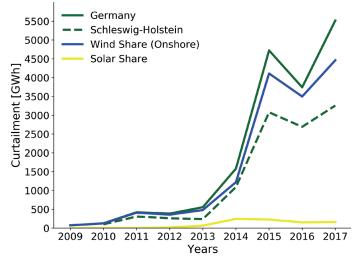


The expansion of renewable energy (RE) in Germany increasingly leads to grid bottlenecks on the decentralised level. As a result, renewable energy sources are curtailed. These service changes are relevant for distributors, whose trading positions are exposed to the short-term price of electricity in Europe. Moreover, this also affects direct marketers in their own balancing group if grid restrictions cause the projected production performance of the marketed facilities to systematically deviate from the respective marketed volume.

The EinsMan Monitor will provide you with real-time key information concerning the curtailment of renewable energy, in conjunction with feed-in management. To achieve this, UBIMET combines the insights gained from its own renewable energy forecasts with feed-in management notifications. Through the aggregation of the available real time information, you will receive vital assistance with your decision-making processes.



Development of feed-in management in Germany

## PRODUCTS

• EinsMan Monitor portfolio

We combine our insights gained from the renewable energies forecast with real-time feed-in management notifications and report any curtailments to your customised portfolio. If desired, we can provide solutions that are site-specific and tailored to any type of RE technology. This solution is particularly interesting for grid operators and direct marketers.

## EinsMan Monitor Germany

We combine our insights gained from the renewable energies forecast with feed-in management notifications in real-time. We determine the affected services all over Germany or individually for each control area. This is especially interesting for spot traders.

\* The invention that forms the basis of our solutions is protected as a utility model (DE 20 2017 100 343.4) and has also been filed for a patent (DE 10 2017 101 265.6), European patent application no. 18152474.5 and in the USA US patent application no. 15/879,326).



## YOUR BENEFITS

#### Short-Term Trading

Sometimes multiple GWs of renewable energy production potential are not fed into the system as part of the feed-in management process. Knowledge of future renewable energy curtailment goes hand in hand with improved price fluctuation anticipation and all related advantages.

#### Grid Operation

The grid operator is responsible for the secure operation of the grid infrastructure. Measurements taken by other network operators can directly influence your network area. UBIMET's feed-in management forecast helps grid operators anticipate critical grid scenarios.

## Direct Marketing

Whenever production of renewable energies that are allocated to an operator's own balancing group is reduced as part of the feed-in management activities, balancing group discrepancies paired with an increased demand for balancing power arise. UBIMET's EinsMan Monitor helps operators minimise these uncertainties.

# CUSTOMISED AND FLEXIBLE DATA PROVISION

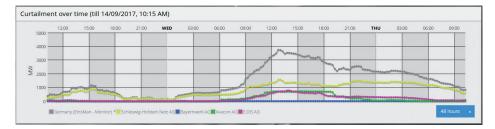
- Data displayed in the online Weather Cockpit<sup>®</sup> as a time series, geographical map and speedometer with 15-minute resolution
- Format: CSV, EXCEL, XML
- Supplied as: E-mail, (S)FTP, web services

## COMBINATION POSSIBILITIES

- UBIMET EinsMan Forecast
- UBIMET Wind Power Forecast
- UBIMET Solar Power Forecast
- UBIMET Weather Forecast

# "Feed-in management activities now affect all regions of Germany."

(Monitoring report 2014, Bundesnetzagentur [German Federal Network Agency])



Example EinsMan Monitor 14/09/2017

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# ABOUT UBIMET

Increase efficiency, reduce cost and enhance safety. These objectives can be achieved in the energy market with UBIMET weather data solutions and services. We offer high-quality hyper local and timely weather data, meteorological analyses as well as short- and medium-term forecasts for customers in the energy sector. For more information on our comprehensive product and solution portfolio, ranging from standardised products to specific tailor-made solutions please visit www.ubimet.com.

