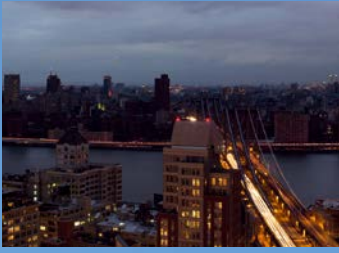


GRID OPERATIONS SAFETY – TODAY & TOMORROW

WITH HIGHLY PRECISE
WEATHER SOLUTIONS

YOUR CHALLENGES



PROVIDING GRID STABILITY



INTEGRATING VOLATILE RENEWABLE ENERGY INTO THE GRID



OPTIMISING TRANSFER CAPACITY BY OVERHEAD LINE MONITORING



TRADING RENEWABLE ENERGY WITHIN THE GERMAN RENEWABLE ENERGIES ACT



SCHEDULING SAFE MAINTENANCE AND SERVICE OPERATIONS



TAKING INCREASE IN RENEWABLE ENERGY INTO CONSIDERATION IN THE GRID DEVELOPMENT PLAN



PREDICTIVE MAINTENANCE & VALIDATING DAMAGE CAUSED BY FORCE MAJEURE

OUR SOLUTIONS




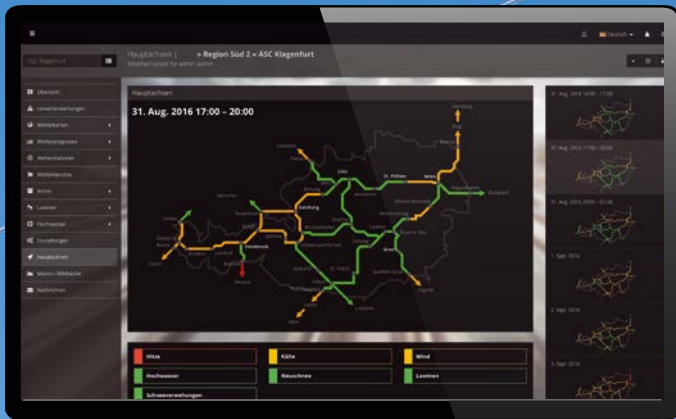
RENEWABLE ENERGY

- Highly-precise wind, solar and hydropower forecasts
- Unique feed-in management solutions
- Time series for long-term comparison of wind & solar feed



WEATHER DATA

- High resolution weather analysis in real time (HYDRA) via UBI:Connect Weather-API
- Own, highly precise short-term weather model (RACE)
- Weather forecasts for transformation substations, power lines and grid regions
- Highly precise lightning detection system powered by 
- Historical global measurements and climate time series
- Long-term energy meteorological re-analysis data
- Current measurements, satellite & radar images



WEATHER COCKPIT®

- Highly flexible online presentation of weather information
- Live weather data (satellite and radar images, lightning, station data)
- Weather forecasts for transformation substations, power lines and grid regions
- Real-time weather analysis and model forecasts
- Renewable energy and feed-in management forecasts
- Uniform and proactive warning and alert system
- Customer specific visualisations (e.g. power lines, transformer substations)

SEVERE WEATHER WARNINGS & ALERTS

- Our own severe weather centre will keep you informed 24 hours a day, 365 days a year
- Warnings
 - provided by experienced severe weather meteorologists
 - with individual threshold values
 - for gales, freezing rain, thunderstorms, heavy rain, snowfall
- EC-warnings for power grid operators
 - Hurricanes, freezing rain, wet snow
- Special warnings for distribution grid operators
 - wind breakage risk index, icing risk index
- ISO-certified data transmission via e-mail, SMS and Weather Cockpit®



- ✓ Grid stability – more safety with precise and reliable weather data
- ✓ Transmission capacity – optimizing with weather-data based overhead line monitoring
- ✓ Preventing power failure with pinpoint (severe) weather information
- ✓ Plausibility checks for overload damage with highly precise lightning detection system
- ✓ Marketing in compliance with the German Renewable Energies Act (EEG) – optimizing EEG allocation account with improved performance forecasts
- ✓ Optimising O&M with user-friendly data presentation in our Weather Cockpit®
- ✓ Grid development plan: optimum planning with comparable long-term time series
- ✓ Improved planning of maintenance operations as well as reducing power outages with predictive maintenance
- ✓ Precise and quick damage plausibility checks with meteorological expert reports

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ABOUT UBIMET

UBIMET is the leading commercial provider of highly precise meteorological services and severe weather warnings. The global company is headquartered in Vienna, Austria and has offices in Karlsruhe, Melbourne, Munich, New York and Zurich employing 200 staff from 25 nations. UBIMET provides high-quality meteorological data, forecasts and alerts enabling weather-dependent industries around the globe to increase safety and efficiency.

UBIMET's expertise and reliable weather solutions have convinced customers from industries such as energy, aviation and rail, media as well as event organisers.

The company was founded as a start-up by Michael Fassnauer and Manfred Spatzierer in Vienna in 2004. The two founders, driven by a passion for meteorology, are still the driving force behind the company today.

www.ubimet.com

To accommodate the high demands of the energy industry, UBIMET offers:

INDUSTRY-SPECIFIC KNOW-HOW

- A center of excellence with 20 experts dedicated entirely to the energy business in Karlsruhe
- Energy-specific know-how and expertise of 15 years
- Investment of 25% of annual revenue in international research projects in the fields of energy & mobility, smart cities, and disaster management

HIGH PRECISION METEOROLOGY

- One of the world's largest weather databases (weather stations, satellites, radar, lightning)
- Access to the world's leading and global weather models (incl. ECMWF and GFS)
- Own, high resolution weather-analytical tool HYDRA (resolution up to 100m)*
- Own, high resolution local weather model RACE (resolution up to 100m)
- Own 24/7 severe weather centre
- Highly precise wind and solar power production forecasts
- Protected method for feed-in management and volume forecasts**

LEADING EDGE IT INFRASTRUCTURE

- Four global data centers processing more than 100 TB of data per day (Big Data)
- Intuitive and state-of-the-art platform solutions with our Weather Cockpit®
- Full integration of weather data into customer IT systems via secure data transmission and sFTP-Server and leading edge API-solutions

** The invention, on which our solutions are based, has been registered for patent (European patent application No. 17450001.7 as well as US Patent Application No. 15/860.189) by UBIMET.*

*** The invention was protected as utility model (DE 20 2017 100 343.4) and has been filed for patent (DE 10 2017 101 265.6, European patent application No. 18152474.5 as well as US patent application No. 15/879,326) by UBIMET.*

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