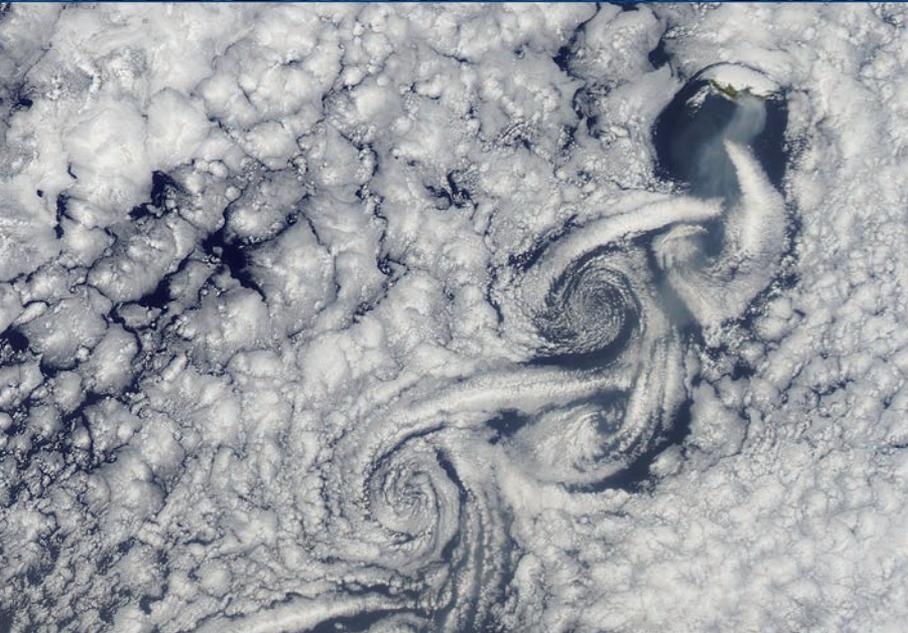




ANEMOS  
Wind Power Forecasting

The image shows three offshore wind turbines in a row, with a service vessel positioned in front of the first one. The scene is set against a clear blue sky and a dark sea. The text 'ANEMOS Wind Power Forecasting' is overlaid on the image in a large, white, sans-serif font.

- World-Wide Predictions
- Highest Accuracy
- Ramps and Extreme Events
- More than 50 GW Installed
- 100% Achieved Availability
- R & D EU-Project Anemos
- Anemos.plus, SafeWind
- Offshore Wind Farms



# Predictions world-wide

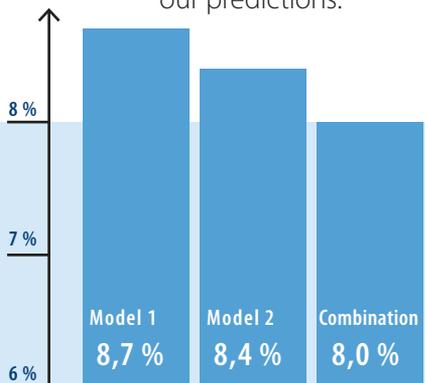
Today, most energy economy sectors are reliant on predictions of expected wind energy input. Power plant scheduling, power trading and grid operations can only be carried out optimally when an exact and reliable prediction of wind power is available for the next hours and days. With the Anemos wind power prediction system, we provide a solution which is accurate, reliable, flexible, and cost-effective. The Anemos system is a commercial spin-off of various research and development activities and is today implemented on a world-wide scale. This system is operated and further developed by a group of six project partners.



Predictions provided  
by the Anemos group.

# Predictions with High Accuracy

The high accuracy of Anemos wind power predictions rests on a consistent multi-model approach. Each prediction involves combining multiple weather models as well as different physical and statistical wind power prediction models in such a way that an optimal accuracy is achieved at every point in time. Today, we have the ability to draw on models from several partners ranking among the top prediction providers in Europe and in total responsible for predicting over 50 GW of wind power installations world wide. The fast implementation of knowledge from current research into commercial use leads to the continuous improvement of our predictions.



Real world example:  
Advanced combination of different prediction models leads to forecasts with highest accuracy.

For our customers predictions are an essential component of their business processes. For this reason, we do our utmost to ensure optimal forecasts and high availability of our systems. With our years of experience, mirrored server systems, quality management and a support team available 24/7, we achieved 100% availability in the last 5 years. This applies to server solutions operated by us for our customers as well as to systems integrated on-site into the IT infrastructure of our clients. In recent years our prediction system was intensively tested by customers, including formal acceptance tests, both for stability and the maintaining of no-single-point-of-failure criteria.

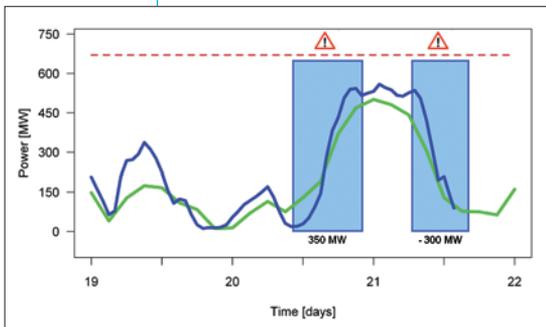


## Quality and Reliability

# Ramps and Extreme Events

Managing extreme events such as storm fronts is becoming an ever more important task in light of increasing amounts of wind energy in the electricity grid.

We tackle this challenge with specialized models for ramp prediction, coupled with an alarming system for extreme situations which informs the user of expected power surges, declines or shut-down events as early as possible.



Time response of two predicted (green) and actually occurring ramps (blue).



## Research and Development

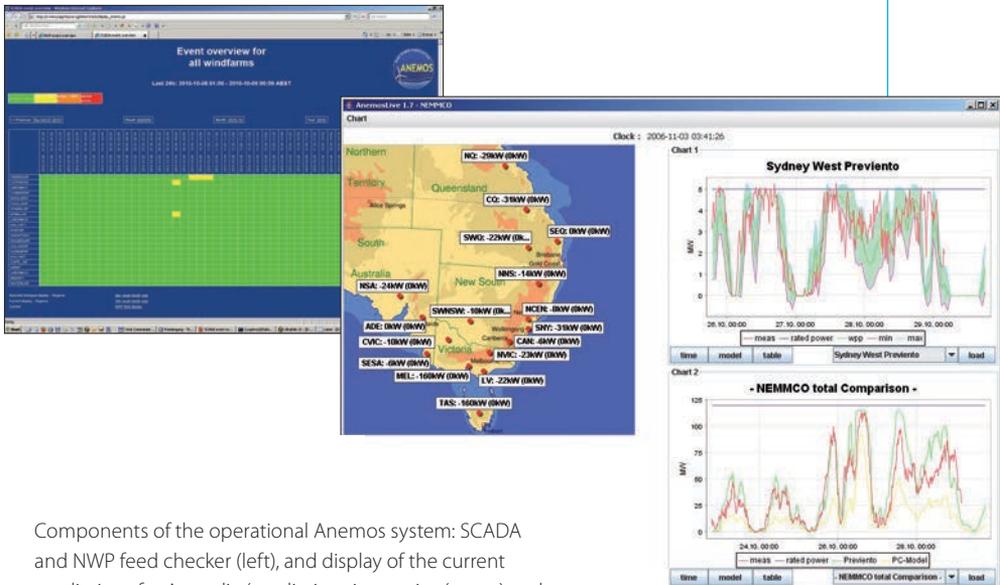
The successful work completed in the Anemos project has been continued in the EU projects Anemos.plus and Safe-Wind, bringing the state of the art of wind power prediction even further.

Anemos.plus is devoted to the special benefits of increasingly interlocked wind power predictions and business procedures from the energy economy: bottleneck optimization, power trading, storage management and reserve planning.

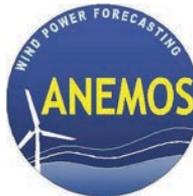
The SafeWind project's focal point is on the prediction of extreme events like ramps. Moreover, the Anemos partners are active in numerous national and international research projects on the topics of predictions, Smart Grids and wind energy storage.

# Experience and Customers

Anemos partners have now worked more than 20 years in the area of wind power predictions. As part of the interaction between research institutions and companies, we continuously improve state-of-the-art solutions along with the commercial application side of wind power predictions. Anemos predictions today are provided for TSOs, utilities or market system operators in Australia, the US, the UK, Ireland, Canada, Denmark, Greece, France, Spain, and Portugal. Through the flexible Anemos prediction platform and our ongoing research, we succeed in swiftly putting research results into practice and satisfying the current and future needs of our customers.



Components of the operational Anemos system: SCADA and NWP feed checker (left), and display of the current predictions for Australia (prediction time series (green) and the uncertainty (90%, light-green band) (right)).



### Contact Person

Dr. Hans-Peter (Igor) Waldl  
+49 441 939400-00  
anemos@overspeed.de

### Overspeed GmbH & Co. KG

Im Technologiepark 4  
26129 Oldenburg  
Germany  
info@overspeed.de

overspeed.de  
windpowerpredictions.com

### The partners of the commercial Anemos branch:

 consortium manager, Germany

 scientific coordinator, France

 Germany

 Denmark

 Denmark

 Spain

