

Previento delivers reliable forecasts of the anticipated wind power production for arbitrary sites worldwide.

#### Previento overview

- ▶ Wind power predictions for
  - locations worldwide
  - any configuration of wind farms
  - total of large regions
  - total of control areas
- ▶ time horizon: 0 to 96 hours
- ▶ temporal resolution: 1 hour down to 15 min
- ▶ individual confidence intervals
- ▶ several updates per day
- ▶ delivered by email, ftp or modem
- ▶ access via web browser
- ▶ ASCII (csv, txt) or scheduling formats (ESS, KISS)
- ▶ secure server operations

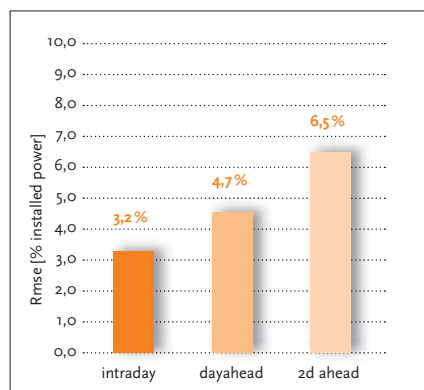
# Previento

## WIND POWER FORECASTS FOR THE ENERGY MARKET



[www.previento.com](http://www.previento.com)

High prediction accuracy of the forecast for Germany from 1/2005 through 7/2006:



Source: EnBW

#### Previento Support

- ▶ hotline for critical weather situations
- ▶ workshops on wind power prediction

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Photos: www.paul-langrock.de (Cover); Jens Meier, Bremen



References:



# Previento makes wind energy predictable

The ability to know today how much wind power will be produced over the next few days gives you a decisive advantage on the energy market.

Previento delivers reliable forecasts of the anticipated wind power production for arbitrary points around the world.

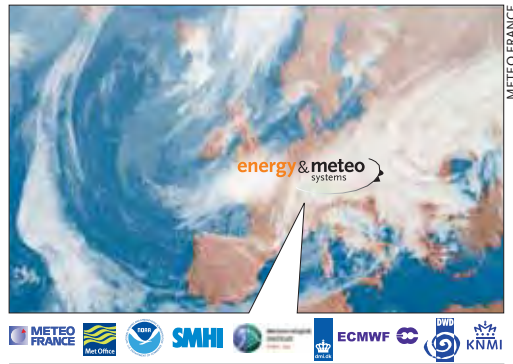
Previento offers important information on the efficient integration of wind power into grid operation, power plant scheduling, and energy trading. Previento is based on meteorological know-how. International research projects such as ANEMOS and ANEMOS.plus allow us to ensure that Previento is continuously kept up-to-date with the newest technology.

Further information concerning wind power prediction:

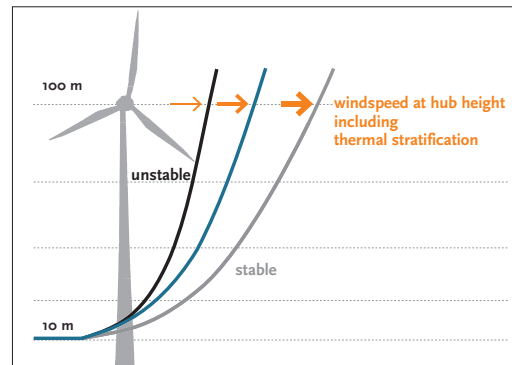
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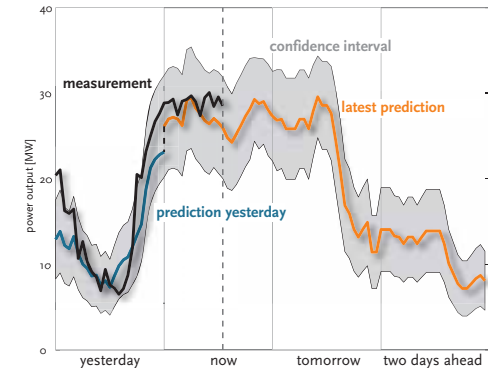
## 1 Based on Multi-model Input



## 2 Optimal Wind Profile



## 3 Previento Wind Power Prediction



### ► Putting the strengths of leading weather models to use

A precise weather forecast is the foundation of a reliable wind power prediction. We gather weather data from all leading weather services ❶ – like DWD, ECMWF, UKMet Office, MeteoFrance or NOAA. Previento knows the abilities of individual weather models exactly and can take specific advantage of the strength of each when predicting wind power. With the help of a process developed by us, different weather predictions for any type of weather are combined optimally. Thus, the quality of the prediction is again significantly improved and extreme events such as storms are predicted more accurately than before.

### ► Previento – the physical model

Previento uses physical methods to calculate wind power predictions based on weather data. To accomplish this, Previento takes the local effects of wind farm sites as well as the specific turbine types into consideration. In particular, Previento includes the thermal stratification of the atmosphere to determine the right wind speed at hub height ❷.

In addition to its prediction value, Previento also provides the uncertainty along with each forecast ❸ in accordance with prevailing weather conditions. That way you will know which deviations are possible even in difficult weather situations.

The system was originally developed at the University of Oldenburg and has been thoroughly verified in practice.

### ► Custom-tailored to your needs

Previento is custom-tailored to meet your demands and is designed to calculate reliable predictions in different temporal resolutions for individual wind farms as well as for regions and utility areas. Wind farms can be grouped together and aggregated in any order. Online measurements of wind power production may be taken into account by Previento to further optimise forecasts and to use its approved shortest-term prediction methods covering lead times up to 6 hours. Generally, measured data is not necessary to produce a forecast. In addition to the usual electronic delivery, you can use your web browser to visualise, download and evaluate current as well as historical forecasts.

>>> [www.combiforecast.com](http://www.combiforecast.com)

