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Abstract title

The new IEA Task on Wind Power Forecasting

Introduction

Wind power forecasts have been used operatively for over 20 years. Despite this fact, there are still several possibilities to improve the forecasts, both from the weather prediction side and from the usage of the forecasts. The new International Energy Agency (IEA) Task on Wind Power Forecasting tries to organise international collaboration, among national weather centres with an interest and/or large projects on wind forecast improvements (NOAA, DWD, …) and operational forecaster and forecast users.

Approach

The Task is divided in three work packages: Firstly, a collaboration on the improvement of the scientific basis for the wind predictions themselves. This includes numerical weather prediction model physics, but also widely distributed information on accessible datasets. Secondly, we will be aiming at an international pre-standard (an IEA Recommended Practice) on benchmarking and comparing wind power forecasts, including probabilistic forecasts. This WP will also organise benchmarks, in cooperation with the IEA Task WakeBench. Thirdly, we will be engaging end users aiming at dissemination of the best practice in the usage of wind power predictions.

Main body of abstract

This poster gives an overview of the new IEA Task for Wind Power Forecasting. The operating agent of the task is Gregor Giebel of DTU, co-operating agent is Joel Cline of the US Department of Energy. Collaboration in the task is solicited from everyone interested in the forecasting business. We will collaborate with IEA Task 31 Wakebench, which developed the Windbench benchmarking platform, which this task will use for forecasting benchmarks. The task will run for three years.

Main deliverables are an up-to-date list of current projects and main project results, including datasets which can be used by researchers around the world to improve their own models, an IEA Recommended Practice on performance evaluation of probabilistic forecasts, a position paper regarding the use of probabilistic forecasts, and one or more benchmark studies implemented on the Windbench platform hosted at CENER. Additionally, spreading of relevant information in both the forecasters and the users community is paramount.

Participation is open for all institutions in member states of the IEA Annex on Wind Power, see ieawind.org for the up-to-date list.

Conclusion

A new IEA Task on Wind Power Forecasting is presented, opening a forum for international collaboration in this important field for meteorologists, wind power forecasters and end users. For collaboration, please contact the author (grgi@dtu.dk).

Learning objectives

A new international collaboration forum for information exchange on wind power forecasting exists
Recommended Practices on probabilistic forecast evaluation are underway
Participation is invited for all interested parties

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Brief biography

Dr. Gregor Giebel is Senior Scientist at DTU Wind Energy in Risø. His main topic is short-term prediction of wind energy and integration in the grid. He is the Operating Agent of the newly built IEA Wind Forecasiting Task, and collaborates on standardisation within IEC and SGIP. During his 19 years in wind power, he also looked into wind resource estimation, the use of drones for atmospheric measurements, and condition monitoring for the drive train.

Previous presenting experience

More than 4 events

Level of spoken English

Fluent

Photo

Authors & organisations

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Presentation type & topic

General
Topic: Resource assessment