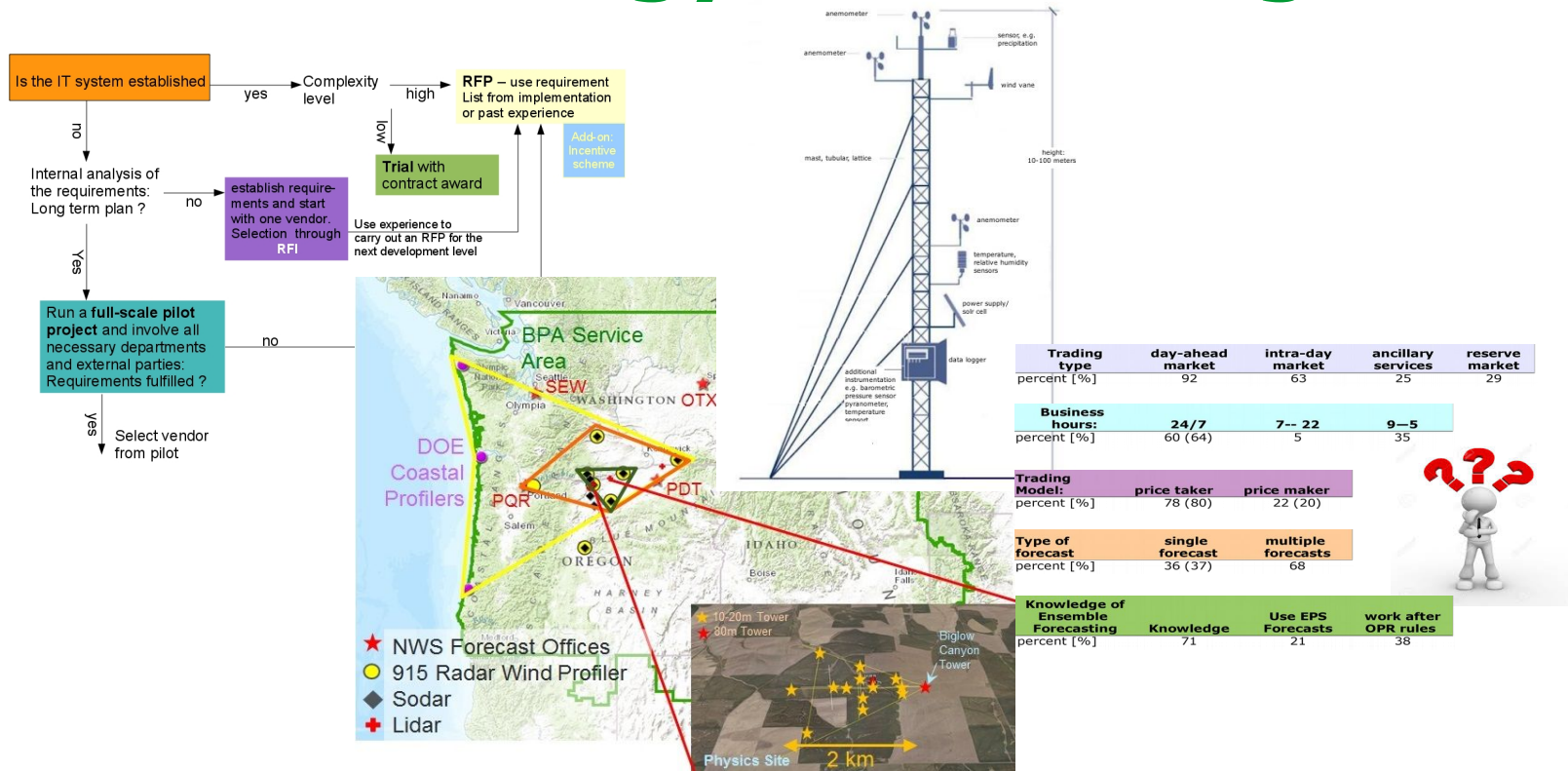


IEA Wind Task 36: Wind Energy Forecasting



Session 4: Forecasting Benchmarking, Trials and Evaluations
 Atlanta, GA, June 21, 2017

Dr. Corinna Möhrlen, WEPROG

IEA Wind Task 36: Forecasting for Wind Energy

2016 - 2018

Task Objective is to encourage improvements in:

- 1) weather prediction
- 2) power conversion
- 3) use of forecasts

Task Organisation is to encourage international collaboration between:

- Research organisations and projects
- Forecast providers
- Policy Makers
- End-users and stakeholders

Task Work is divided into 3 work packages:

- WP1: Weather Prediction Improvements inclusive data assimilation
- WP2: Development of a benchmarking platform & best practice guidelines
- WP3: Communication of best practice in the use of wind power forecasts

Follow us on our webpage: www.ieawindforecasting.dk

WP1: Weather Prediction Improvements inclusive data assimilation

1. **Compilation of list of available data sets, especially from tall towers**

List on Homepage → Topics → Task 1.1 Available Data Sets

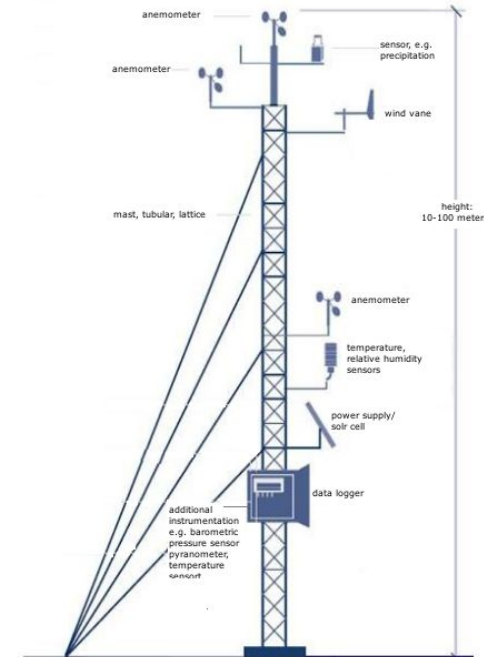
<http://www.ieawindforecasting.dk/topics/work-package-1/task-1-1>

2. **Announcement of field measurement programs and availability of data for research**

3. **List of recent and current meteorological experiments**

<http://www.ieawindforecasting.dk/topics/work-package-1/task-1-2>

3. **Verification and Validation of improvements through a common data set to test model results**



WP2: Benchmarking, Predictability and Model Uncertainty

1. Design and Evaluation of benchmark exercises:

- Best practice guideline for the Design of Benchmarks and trials
- Best practice guideline for forecast evaluation, benchmarks and trials

Started – first public draft version ready in autumn 2017

2. Evaluation protocols for deterministic + probabilistic forecasts:

- review of existing protocols **To be started in summer 2017**
- best practice
- critical assessment of new proposals

3. Uncovering uncertainty origins through the whole modelling chain.

Just started...

4. Set-up and dissemination of benchmark test cases and data sets

To be started in summer 2017

WP3: Closing the gaps of Forecast usage and Forecast Uncertainties in the Power Sector

Investigation about forecasts uncertainties in the business practices of actors in the power systems sector

- State of the art review
- Value from the use of probabilistic forecasts:
 - × Review of existing approaches and applications
 - × Evaluation and quantification
- best practices guideline

Use of forecasts in decision making

- State of the art review
- Knowledge sharing from demonstration/pilot projects

Role of short-term forecasting in decision making

- Assessment related to long term (multi annual) processes

Communication of wind and wind power forecasts to end-users.

- Review
- Recommendations
- Best practice guidelines
- Do we need a Standardisation of wind power forecasting products?



Questionnaire: Forecasts uncertainties in the business practices of actors in the power systems sector

How to participate:

1. Go to our Webpage (www.ieawindforecasting.dk → news) or to our dropbox to collect a questionnaire
2. Fill it out and send it to [<ieawind36.wp3@gmail.com>](mailto:ieawind36.wp3@gmail.com) or upload it anonymously at our dropbox!



Dropbox

→ interview documents:

<https://www.dropbox.com/l/sh/2enjMxIGWsOvVvcGxBNjRo>

→ **submission:** <https://www.dropbox.com/l/sQH9I8nW9LQlhYZNEGlyRG>

Submission possible as "common user": Interview Provision

[<ieawind36.wp3@gmail.com>](mailto:ieawind36.wp3@gmail.com)

Purpose: no need to register with Dropbox to delivery the interview

3. Talk to me! Tell me about your "head aches", I'll bring them forward to include the topic in our guideline!



Follow us or join us...

Project webpage

<http://www.ieawindforecasting.dk/>

Workpackage-pages: *www.ieawindforecasting* → *Topics*

WP1: Weather prediction improvements

<http://www.ieawindforecasting.dk/topics/work-package-1>

WP2: Benchmarks and Evaluation

Task 2.1 Best Practice coming soon ...

Task 2.4 Test Cases

<http://www.ieawindforecasting.dk/topics/workpackage-2/task-2-4>

WP3: End Use and Communication

<http://www.ieawindforecasting.dk/topics/workpackage-3/task-3-1>

<http://www.ieawindforecasting.dk/topics/workpackage-3/task-3-5>

Contacts of Workpackage and Task Leaders at the WP-pages



Follow us or join us ...

PUBLICATIONS: ALL OUR WORK IS MADE PUBLICLY AVAILABLE

<http://www.ieawindforecasting.dk/publications>

5 interesting information lists:

<http://www.ieawindforecasting.dk/news> → 5 Lists in Wind Forecasting

[Meteorology masts](#) with online data over 100m height, useful for verification of wind speed predictions

[Publicly available wind power forecasting benchmarks](#),
to test your model against

[Current or finished research projects in the field of wind power forecasting](#)

[Meteorological experiments going on currently or recently](#)

[Future research issues](#)