

## Fit in wind energy and green hydrogen

**Beginner's seminar from September 03 - 05, 2024**

**Hotel: Atlantic Grand Hotel Bremen**

**Registration: [www.wab.net/termine/veranstaltungen/](http://www.wab.net/termine/veranstaltungen/)**

Day 1 – 3: Member 999,- € Non-member 1.299,- €  
Day 1 + 2: Member 790,- € Non-member 990,- €  
Day 3: Member 395,- € Non-member 495,- €

All prices plus 19% VAT.

### Basic seminar “Fit in wind energy”

03. September, 09.00 – 17.00 Uhr

Speakers:

**Markus Nölke** (WAB e.V.) and  
**Jan Liersch** (FGW e.V.)

Max. 20 participants

#### PART 1:

„How to achieve energy from wind”

##### BLOCK I

Introduction to the use of wind energy

- ▶ Brief insight into the potential of wind energy for the energy supply
- ▶ Power from the wind and power conversion by a wind turbine (WTG)
- ▶ Wind regime at the location – wind distribution, turbulence and site influences

##### BLOCK II

Market and technology of wind energy

- ▶ Technical concepts and designs of wind turbines – Gearbox or direct drive?
- ▶ State of the art in wind energy technology: offshore and onshore wind turbine
- ▶ Technology trends in wind energy utilization

#### PART 2:

„How to achieve money from wind”

##### BLOCK III

Planning and financing wind farms

- ▶ Yield analysis of wind turbines and wind farms
- ▶ Financing wind farm projects
- ▶ Political framework conditions

##### BLOCK IV

Industry aspects of the use of wind energy

- ▶ Operation and maintenance of wind farms
- ▶ Technical framework conditions for wind energy
- ▶ Grid connection and grid expansion

### Advanced seminar “Offshore”

04. September, 09.00 – 17.00 Uhr

Speakers:

**Markus Nölke** (WAB e.V.),  
**Dr. Bernd Horstmann** (Summit Renewable Power GmbH) and  
**Alexander Schneeweiß** (EnBW Energie Baden-Württemberg AG)

Max. 20 participants

#### PART 3:

“Entry into the offshore wind industry”

##### BLOCK V

Introduction to

- ▶ National and international offshore wind energy market
- ▶ Status of German offshore projects
- ▶ Energy policy

##### BLOCK VI

Development and financing

- ▶ Project development/approval procedure
- ▶ Grid connection
- ▶ Financing of offshore projects

##### BLOCK VII

Design, technology and installation

- ▶ Fixed and floating foundation
- ▶ Offshore wind turbines
- ▶ Offshore substation
- ▶ Cable systems
- ▶ Land station
- ▶ Ports and harbours
- ▶ Other works

##### BLOCK VIII

Scheduling, Costs, safety and environmental protection

- ▶ Time Scheduling
- ▶ Costs
- ▶ Access systems
- ▶ Helicopters
- ▶ Safety and environmental protection

##### BLOCK IX

Operation and maintenance

- ▶ O&M tasks in offshore wind energy
- ▶ Infrastructure and logistics
- ▶ Special challenges

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## Getting started with “green” hydrogen 05. September, 09.00 – 17.00 Uhr

Speakers:

**Markus Nölke** (WAB e.V.)

**Alexander Zaczek** (EnBW Energie Baden-Württemberg AG)

Max. 20 participants

### **PART 4:**

#### **Getting started with “green” hydrogen**

#### **BLOCK X**

##### **Introduction - What is hydrogen and why hydrogen?**

- ▶ Basic concepts
- ▶ Chemistry and physics of hydrogen
- ▶ Hydrogen then, now and in the future
- ▶ The hydrogen rainbow
- ▶ RFNBO

#### **BLOCK XI**

##### **Production, Transportation and storage**

- ▶ Changing applications and production processes
- ▶ Electrolysis
- ▶ Transportation
- ▶ Import
- ▶ Storage

#### **BLOCK XII**

##### **Hydrogen in the energy system**

- ▶ Power generation
- ▶ Mobility and transportation
- ▶ Industry
- ▶ Heating
- ▶ Sector coupling
- ▶ Hydrogen demand forecasts

#### **BLOCK XIII**

##### **The path to a green hydrogen future**

- ▶ Political strategies and frameworks
- ▶ Research
- ▶ Funding and incentives
- ▶ First large-scale projects
- ▶ Infrastructure
- ▶ Hydrogen market

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