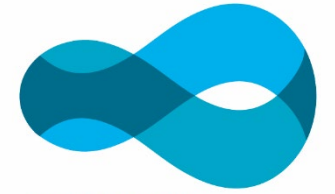


# Getting Introduced to German Offshore Wind Energy Foundation and BOWE2H Results in Germany

Julia Lange

Project Manager from Hamburg



FOUNDATION  
**OFFSHORE**  
WIND ENERGY



# WHO WE ARE

- **founded 2005** on initiative of the ministry of Economic Affairs and Climate Action
- **independent, nonparty and nationwide think-tank**
- **networking & communication platform** for stakeholders from politics, the economy and science
- **broad variety of activities** such as projects, studies, statistics, working groups, stakeholder dialogues, consultancy



FOUNDATION  
**OFFSHORE  
WIND ENERGY**



Alpha Ventus – Germany's 1st



Project OWE & Green Hydrogen



Offshore-Wind & H2 – transnational  
Cooperation in the Baltic Sea



German  
Offshore-Wind  
Initiative

Support Project for German SMEs



Leitprojekt  
**H<sub>2</sub>Mare**

BMBF-‘lighthouse project’ on  
offshore hydrogen production



Autoflow – thermal image-based  
rotor blade inspection

Working Group  
Offshore wind, military & security

See off –  
Decommissioning



# Our BOARD OF TRUSTEES at a glance



The collage features logos for numerous organizations, including:

- 50hertz** (E.ON Group)
- PNE** (PURE NEW ENERGY)
- 8.2** | The Experts in Renewable Energy
- Hamburg** | Behörde für Umwelt und Energie
- TEMAKO**
- NHC**
- wab**
- CARNEADES** (project experts)
- EWE**
- Bundesministerium für Digitales und Verkehr**
- WindMW**
- LSA**
- OMEXOM**
- HDI**
- Orsted**
- BOEHM-BEZING & CIE.**
- OWT**
- PARK WIND**
- DEME OFFSHORE**
- amprion** (verbindet)
- SMULDERS** (EIFFAGE)
- STEELWIND** (NORDENHAM)
- ARGEnergie**
- BWE** (Bundesverband WindEnergie)
- WIRTSCHAFTSFÖRDERUNG // STADTMARKETING EMDEN**
- Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz**
- Ocean Breeze Energy**
- amprion** (Bundesministerium für Wirtschaft und Klimaschutz)
- VDMA**
- BRUNSBÜTTEL PORTS** (more than moving)
- VDR** (Verband Deutscher Reeder)
- WindEnergy Network**
- GDV** (DIE DEUTSCHEN VERSICHERER)
- BREMER LANDESBANK**
- Wind Energy Technology Institute**
- TUV SUD**
- Hamburg Commercial Bank**
- BUSS**
- pwc**
- SIEMENS energy**
- RWE**
- Management**
- IB.SH** (Ihre Förderbank)
- DNV**
- &**
- KFW** (IPEX-Bank)
- RHENUS CUXPORT**
- skyborn**
- COMMERZBANK**
- vallourec**
- Wind EUROPE**
- MV WERFTEN**
- enova**
- DRF Luftrettung**
- ela[container]**
- Trianel**
- IBERDROLA RENOVABLES**
- FRISIA OFFSHORE**
- searenergy limited**
- EMS** (Maritime Offshore)
- MUKRAN PORT INDUSTRIAL SITE**
- VATTENFALL**
- Tennet**
- EnBW**
- KPMG**
- SH**
- INVEST** (IN MECKLENBURG-VORPOMMERN)
- Marsh**
- Vestas**
- DEUTSCHE WINDGUARD**
- WVW** (Wirtschaftsverband Windkraftwerke e.V.)
- GE**
- thuga** (Alltagsgesellschaft)
- DLB BANK**
- Schleswig-Holstein** (Ministerium für Energiewende, Landwirtschaft, Umwelt, Natur und Digitalisierung)
- NORD/LB**
- NSW** (a General Cable company)
- Mecklenburg Vorpommern**
- MV tut gut.**
- Office franco-allemand pour la transition énergétique** (Deutsch-französisches Büro für die Energiewende)
- Gothaer**
- MARIKO**
- equinor**
- Swiss Re**
- Baden-Württemberg** (MINISTERIUM FÜR UMWELT, KLIMA UND ENERGIEWIRTSCHAFT)
- NORTHLAND POWER**
- DOC OFFSHORE**
- SIEMENS Gamesa** (RENEWABLE ENERGY)
- GLOBAL TECH I**

# WHAT WE DO



FOUNDATION  
**OFFSHORE**  
WIND ENERGY

- We monitor **statistics** around offshore-wind expansion in Germany
- We explain offshore-relevant **regulations** and keep up-to-date in tender processes
- We conduct studies on offshore-relevant topics and provide **background papers**

<https://www.offshore-stiftung.de/>



ERZEUGUNG VON  
GRÜNEM WASSERSTOFF DURCH  
WINDENERGIE AUF SEE –  
POTENTIAL UND BEDARF  
IN DEUTSCHLAND  
(KURZFASSUNG)

KURZSTUDIE ZUR ANALYSE DER  
STANDORT-FAKTOREN FÜR DEN BE-  
TRIEB VON ELEKTROLYSEUREN MIT  
OFFSHORE-WINDENERGIE



DEUTSCHE  
**WINDGUARD**



WE TAKE CARE ... of the next generation and public in Germany!



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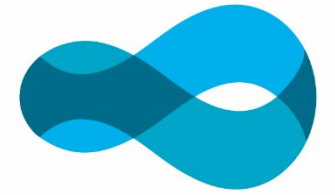
Wind4Kids



**WIND SCHOOL**







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**OFFSHORE**  
WIND ENERGY

# BOWE2H Results in Germany



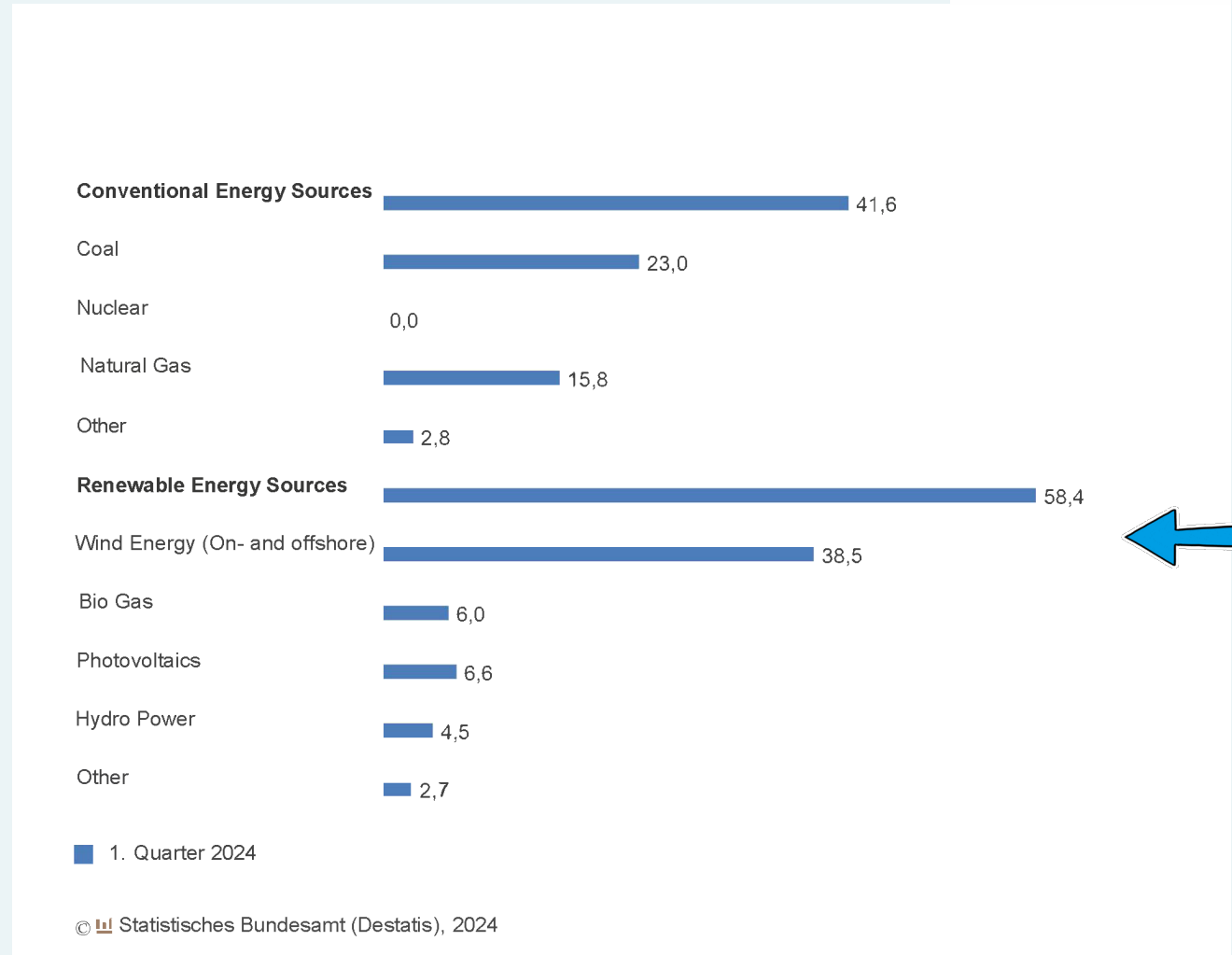
# STATUS QUO Energy Production in Germany



© Stiftung OFFSHORE-WINDENERGIE

Almost **60%** of Germany's energy derives from renewable energy sources in 2024

Almost **40%** from on- and offshore wind energy



# STATUS QUO Wind Energy On- and Offshore in Germany 2024



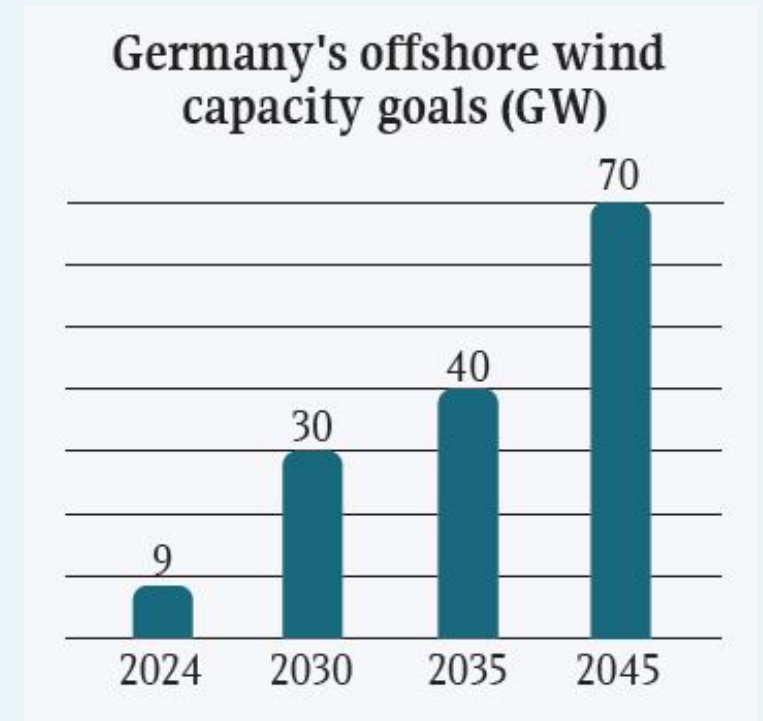
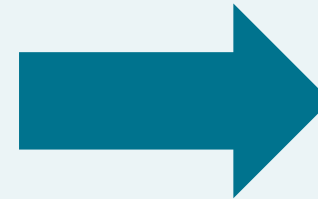
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© Siemens Gamesa



Source: Deutsche Windguard 2024



© IKEM 2024

In the next 20 years offshore-wind energy must increase **8 times** as much.

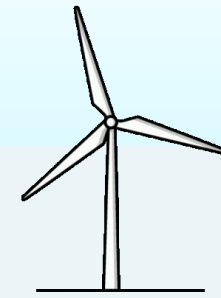


# INTERVIEW RESULTS

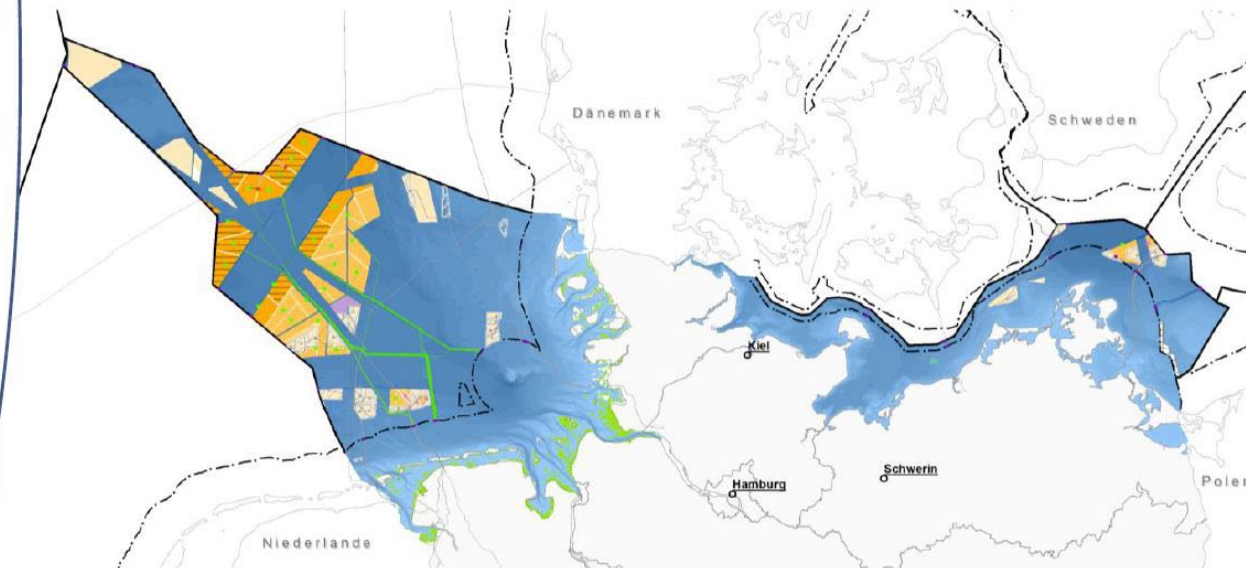


## National public authorities

- **Initial challenges:** implementation of MSP
- **Progress:** acceleration of constructing offshore wind farms needed
- **Future Cooperation:** focus on cross-border connections of offshore wind farms and hybrid interconnectors



## Entwurf Flächenentwicklungsplan



Hamburg, 07. Juni 2024



### National public authorities

- **Regional cooperation:** close, long-standing cooperation with neighbouring countries through various MSP projects and BEMIP
  - European Hydrogen Backbone - <https://www.ehb.eu/>
  - MOHN - <https://www.masterplanoffshore.eu/about-mohn/>
  - Inn2Power - <https://northsearegion.eu/inn2power/about/>

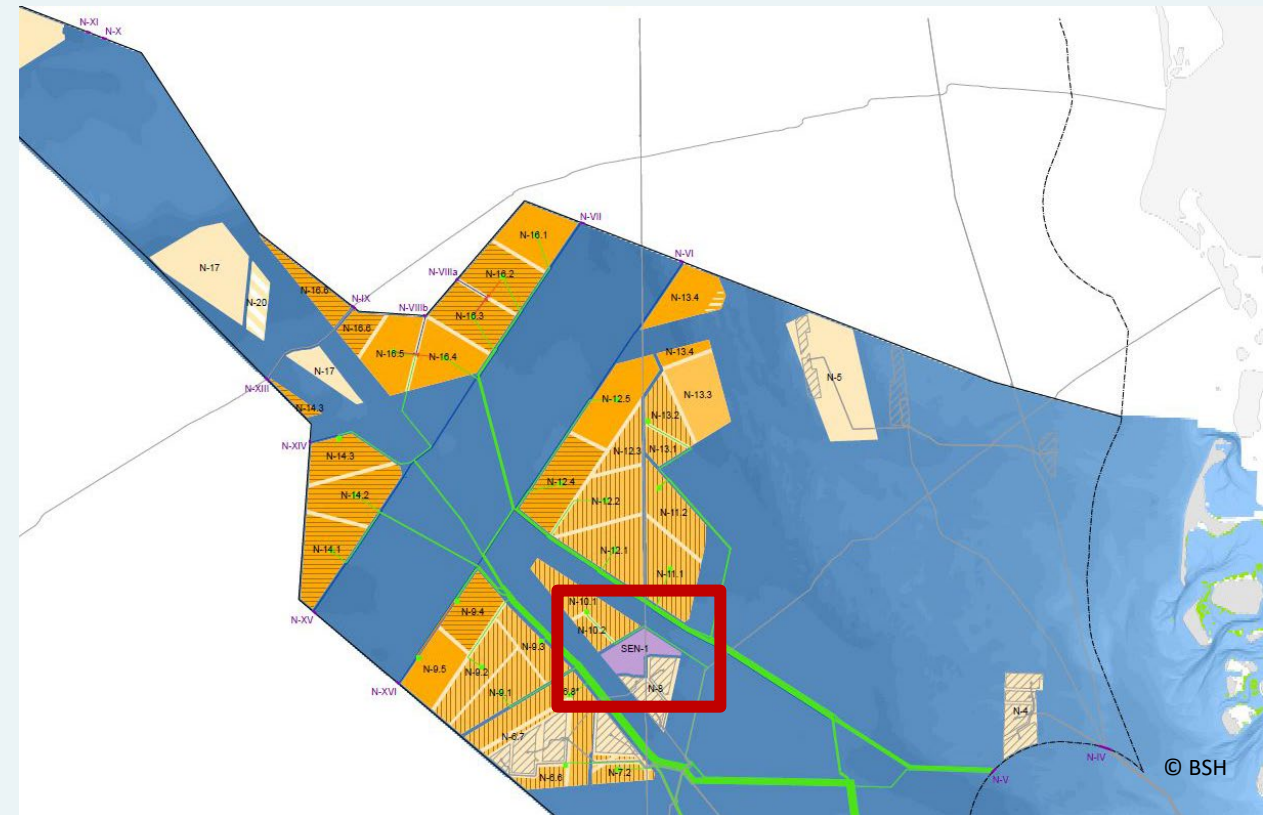


# INTERVIEW RESULTS



## National public authorities

- Pre-MSP plan 2024 highlights SEN-1 zone in the **North Sea** for 1 GW of green hydrogen production
  - area currently under review: SoEnergieV
  - commissioning anticipated in early 2030s
- **Baltic Sea:** emphasis on importance of transnational cooperation
  - especially in hydrogen pipeline network planning



## INTERVIEW RESULTS



**Large  
enterprises**

## GREEN HYDROGEN PROJECTS DEVELOPED IN GERMANY

### Aqua Ventus family

- first large-scale offshore park for green hydrogen in Germany

### H2Mare Project

- offshore production of green hydrogen and other power-to-X products







## Large enterprises



### Hurdles with **HYDROGEN**

1. **Infrastructure:** H2 areas
2. **Investments:** beyond limitations
3. **Technological:** electrolyser efficiency and weather conditions
4. **Logistical Obstacles:** pipelines or cables?
5. **Market and Buyer Landscape:** H2 mainly expected in heavy industry



## Large enterprises



### Hurdles with OFFSHORE-WIND

- 1. In Transnational Projects:** legal and regulatory challenges, technical obstacles, public acceptance
- 2. In Network Design:** future tenders: wind and power-to-X in tandem to stabilize electricity output (and hinder grid strain during high wind speeds)



## INTERVIEW RESULTS

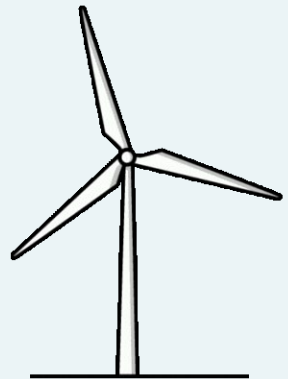


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WIND ENERGY



### Higher education and research institutions

- **Educational and Research programs:** financial support for SMEs to foster R&D
- **Supply chain and labour shortages:** declining student numbers, support from industry associations: adequate training, career guidance, scholarships
- **Enhancing transnational cooperation:** still lengthy approval processes, establish a transnational regulatory body



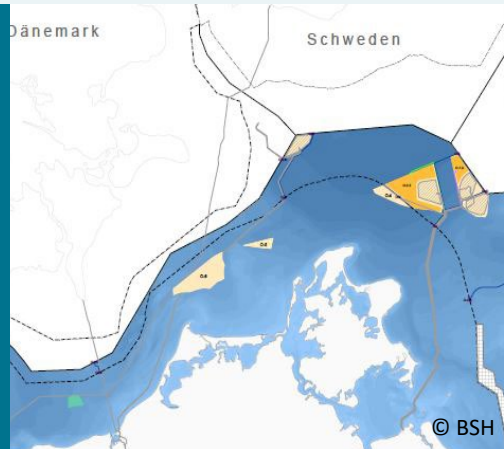
# RECOMMENDATIONS



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WIND ENERGY**

## Enhance Coordination & Simplification

Strengthen role of MSP, develop expansion plans, reduce bureaucratic hurdles



## Public engagement and education

Education about the benefits of OWE to foster greater acceptance



## Engaging Stakeholders

Maintain continuous dialogue with various stakeholders – especially local and national public authorities

## Targets

Sets clear expansion targets and include these in national energy strategies

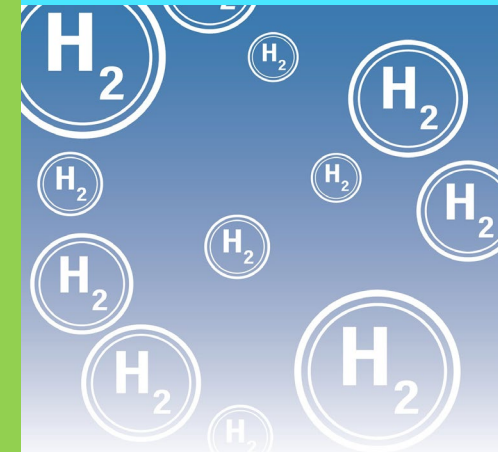
## Hydrogen Areas in German Waters

Designate specific zones for offshore and/or coastal electrolysis



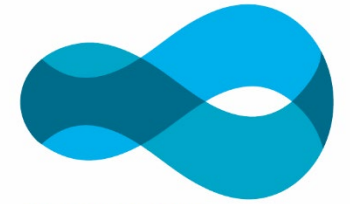
## Infrastructure and Network Planning

Prioritise hydrogen network planning and integration, collaborate with neighbouring countries





Any questions?  
Happy to get in touch.



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