

Offshore Wind Energy in Mecklenburg-Vorpommern

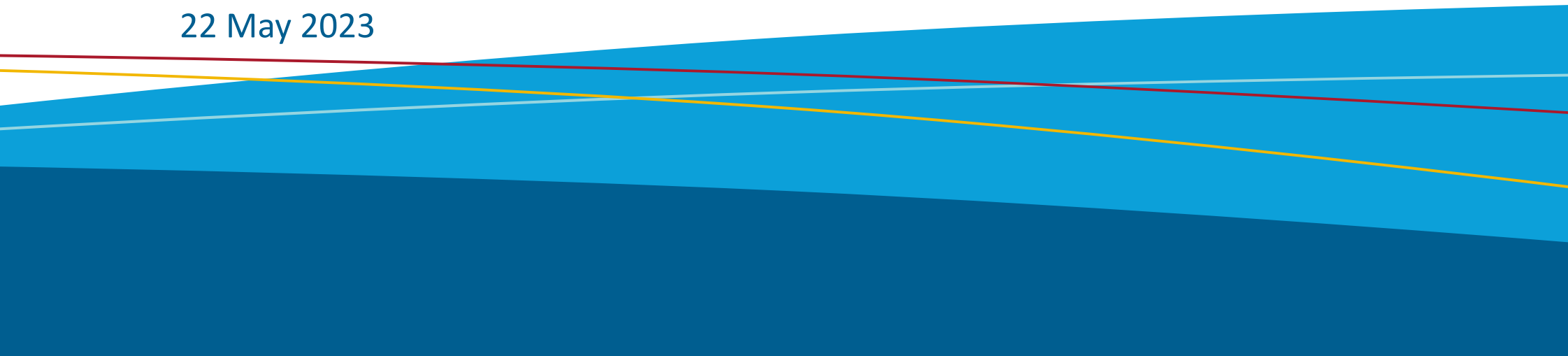
BOWE2H

Offshore and green hydrogen in Germany: national and international innovation

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Mecklenburg-Western Pomerania

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Offshore Wind Energy in Mecklenburg-Vorpommern

Agenda

Status quo: wind farms in operation, in construction and planned projects

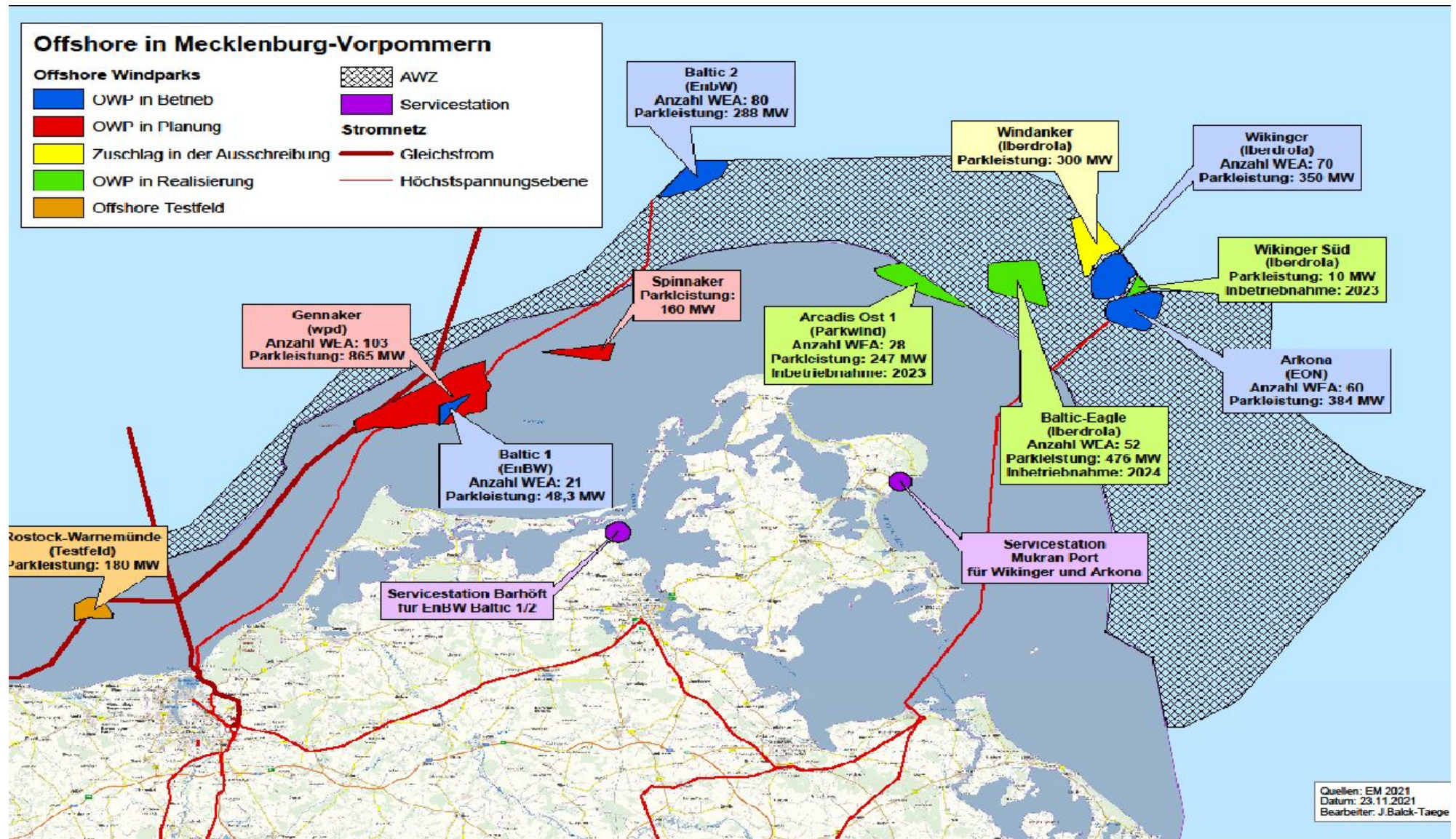
Key objectives of the new government

Cross-border projects and cooperation activities in the Baltic Sea region



Baltic 1, Germany's first commercial offshore wind park in the Baltic Sea

Offshore wind parks in Mecklenburg-Vorpommern



Renewable Energies in Mecklenburg-Vorpommern

„Energy state Mecklenburg-Vorpommern“:

- 72 % of the electricity generated in MV comes from renewable energy sources (48 % Wind, 16 % biomass, 8 % Solar), together approx. 6 MW
- Wind energy in MV: **3.573 MW onshore, 1.072 MW offshore**
- **More than 1.500 MW additional capacity expected in the next years (offshore)**
 - Wikinger Süd (10MW / Iberdrola)
 - Baltic Eagle (476,25 MW / Iberdrola)
 - Arcadis Ost 1 (247 MW / Parkwind NV)
 - Gennaker (865 MW / wpd)
 - Offshore Test Field Rostock-Warnemünde
- Already today Mecklenburg-Vorpommern has achieved a **renewable share of 182 %** of its own electricity demand (largest share of renewable energy sources in Germany)

Offshore goals in the governing parties' new coalition agreement 2021 - 2026 for Mecklenburg-Vorpommern (13 November 2021)

- By 2035 MV wants to cover (mathematically speaking) all energy needs for electricity, heat and mobility from renewable sources → accelerated expansion of solar and wind energy necessary (onshore and offshore)!
- Further goals related to offshore wind energy:
 - Exploit the opportunities of hydrogen technologies for sector coupling and industry, including the support of research on hydrogen production and applications
 - Become one of the leading locations for a climate-neutral economy using its green energy sources as a locational advantage
 - Support the development of the region's ports as industrial sites for the use and production of hydrogen from renewable energies; climate-friendly technologies and production of offshore-plattforms and specialised ships for the offshore wind industry are expected to open up new opportunities for the maritime economy and the shipyards
 - Implement the offshore test field located 10 km off the coast of Rostock-Warnemünde

Cross-border projects and invitation for cooperation

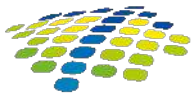
MV aims to strengthen its external economic relations with a focus on the Baltic Sea region and seeks close cooperation especially in the areas of renewable energies, hydrogen economy and a CO²-free Baltic Sea (Coalition Agreement 2021 – 2026)

Projects:

- **Expansion of cross-border electricity lines**
 - Kriegers Flak – Combined Grid Solution (project in operation)
 - Hansa Power Bridge
 - Bornholm Energy Island
- **Hydrogen and Offshore wind**
 - Rostock Energy Port / IPCEI – Hy TechHafen Rostock – Match Making for cooperation on EU-level
- **Research & Development**
 - Offshore wind test field & possible Horizon 2020 project
 - Ocean Technology Campus Rostock / under sea test site „Digital Ocean Lab“



The Rostock Hydrogen Region



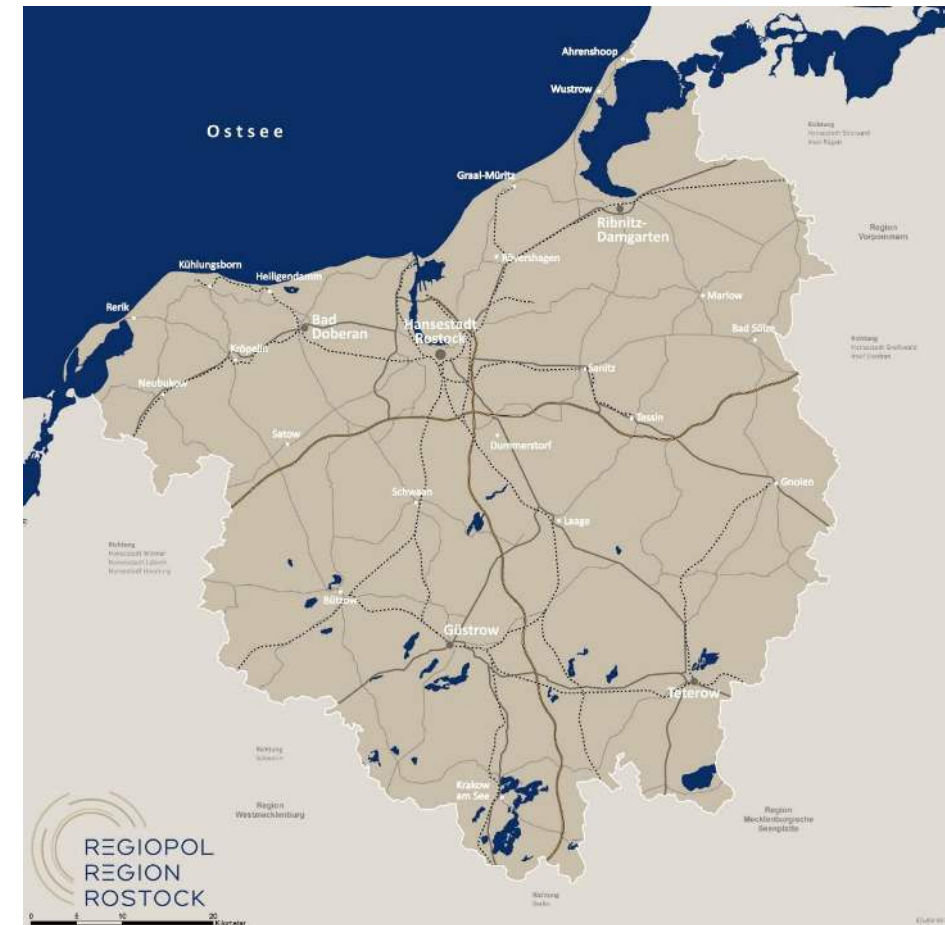
PLANUNGSVERBAND
REGION ROSTOCK



DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Rostock Region

- | Unique location advantages
- | Regional value chain
- | Regional governance

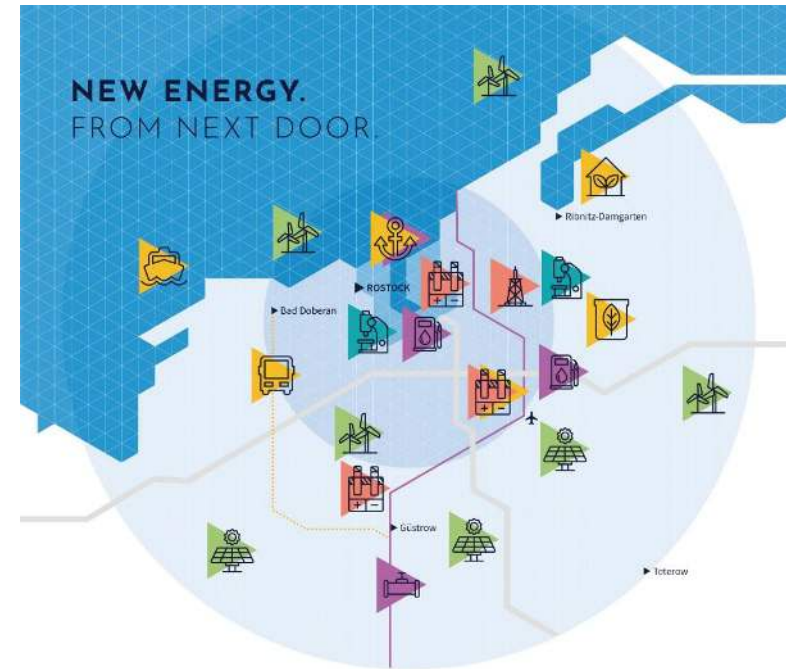




DIE ROSTOCKER
WASSERSTOFFINITIATIVE

The Rostock Hydrogen Initiative

- | Regiopolitical cooperation
- | Networking & Support
- | Studies, events & workshops



**Landkreis
Rostock**
So weit. So gut.





DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Lighthouse projects

- | Renewable energies
- | Innovative technologies
- | Energy efficiency
- | Sector coupling





DIE ROSTOCKER
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Energy Port I IPCEI Projects

- | Hub for climate-neutral
energy sources
- | 100 MW electrolyser
- | Sector coupling





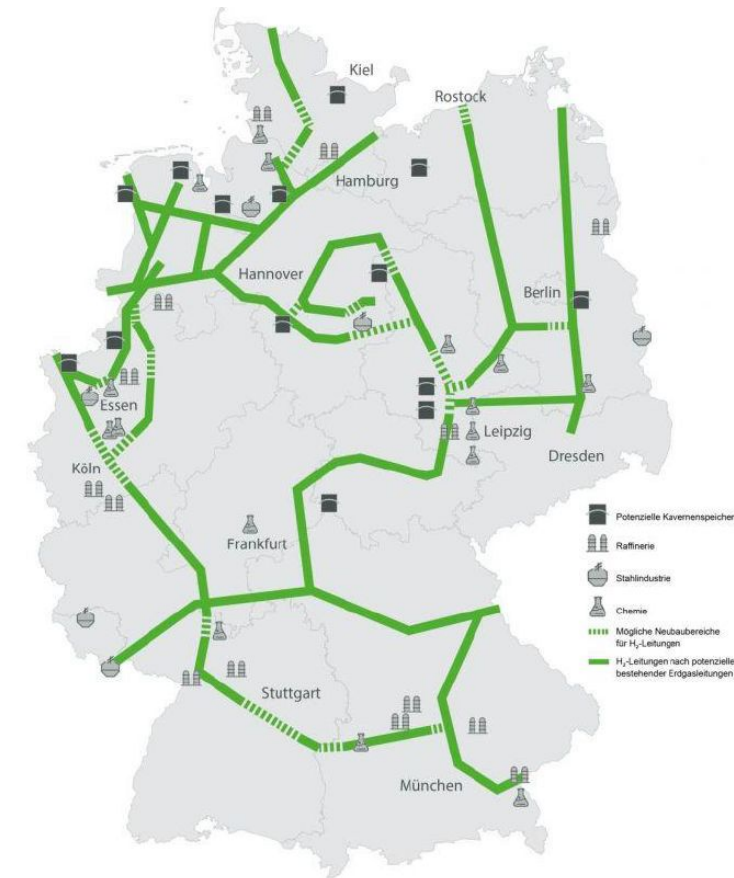
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Doing hydrogen | IPCEI Projects

| Rededication of the natural gas pipeline

| “European Hydrogen Backbone”

| Electrolysers along the pipeline





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Communal transport fleet

| Order of 52 H₂-buses

| 2 filling stations

| Sector coupling

| Total costs : 41,8 Mio. € | Subsidies: approx. 18 Mio. €





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WASSERSTOFFINITIATIVE

Research Factory Hydrogen MV

- | Interdisciplinary network
- | R&D infrastructure for regional industry
- | New technologies for fuels and storage technologies





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Conclusion

- | Establishment and expansion of a Hydrogen economy
- | Attractive location for business enterprises



Mukran

- Mukran on the Island Rügen is a deep water port with a water depth of 10,5 metres it can be accessed by all standard offshore vessels.
- The offshore terminal was used for the construction of the offshore parks EnBW Baltic 2 and Wikingen and currently for Arkona Becken.
- Work is currently underway to develop it into a location for various services in the area of maintenance and operation.
- The current discussion is about a possible location for an LNG-Terminal with one or more ships in Mukran. In the longer term, Mukran is to be further developed as a hydrogen and ammonia terminal.

Thank you for your attention!

Ministry of Economics, Infrastructure, Tourism and Labour Mecklenburg-West-Pomerania

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Renewable Energies

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