Offshore Wind Energy in Mecklenburg-Vorpommern

BOWE2H
Offshore and green hydrogen in Germany: national and international innovation
Olaf Fiesel, Ministry of Economics, Infrastructure, Tourism and Labour
Mecklenburg-Western Pomeriania
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Offshore Wind Energy in Mecklenburg-Vorpommern

Agenda

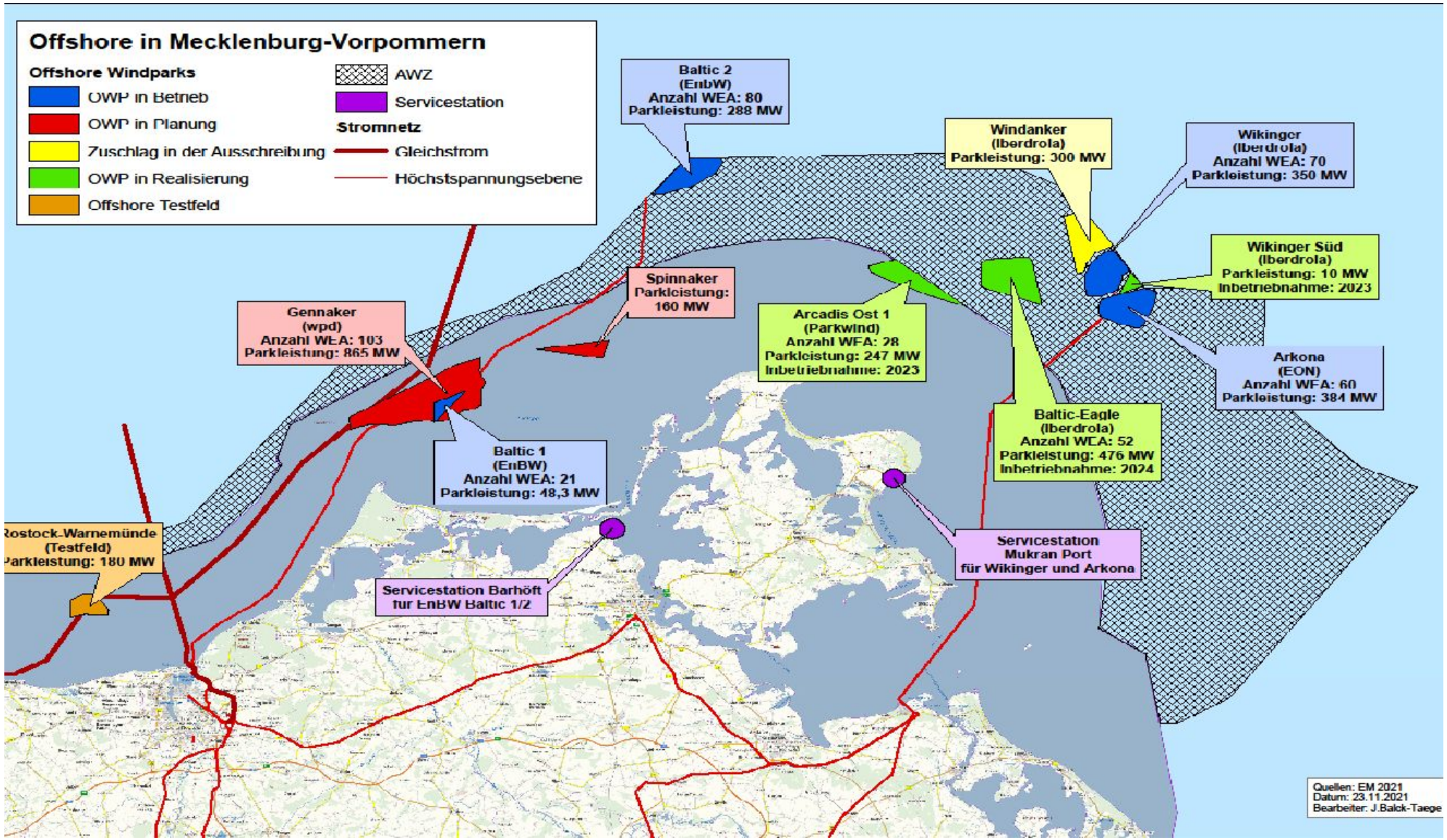
Status quo: wind farms in operation, in construction and planned projects

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 neccessary (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 opportnunities 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, hydrogene economy and a CO^2-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

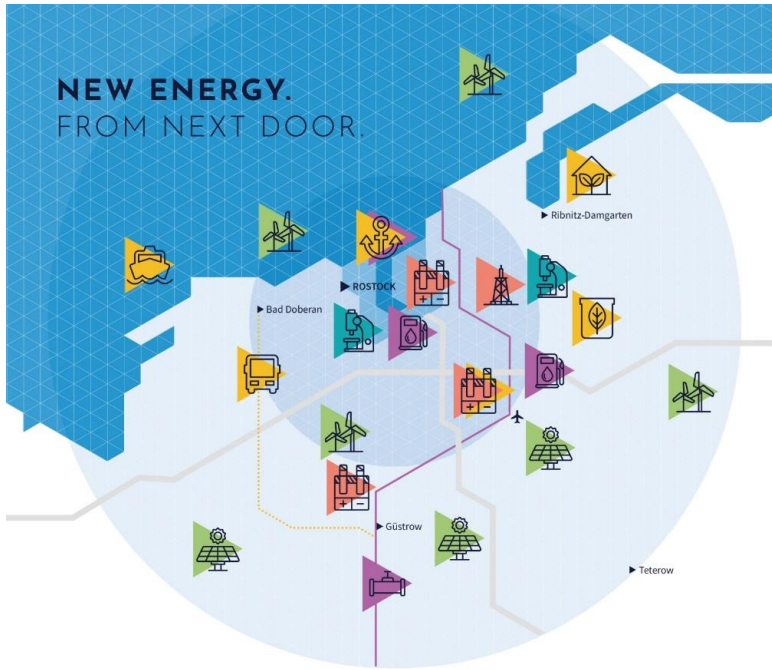
DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Rostock Region

- Unique location advantages
- Regional value chain
- Regional governance

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

The Rostock Hydrogen Initiative



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

MV tut gut.
PLANUNGSVERBAND REGION ROSTOCK
Landkreis Rostock So weit. So gut.
Hanse- und Universitätsstadt ROSTOCK
BERNSTEINSTADT RIBNITZ-DAMGARTEN
IHK zu Rostock

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Lighthouse projects

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

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

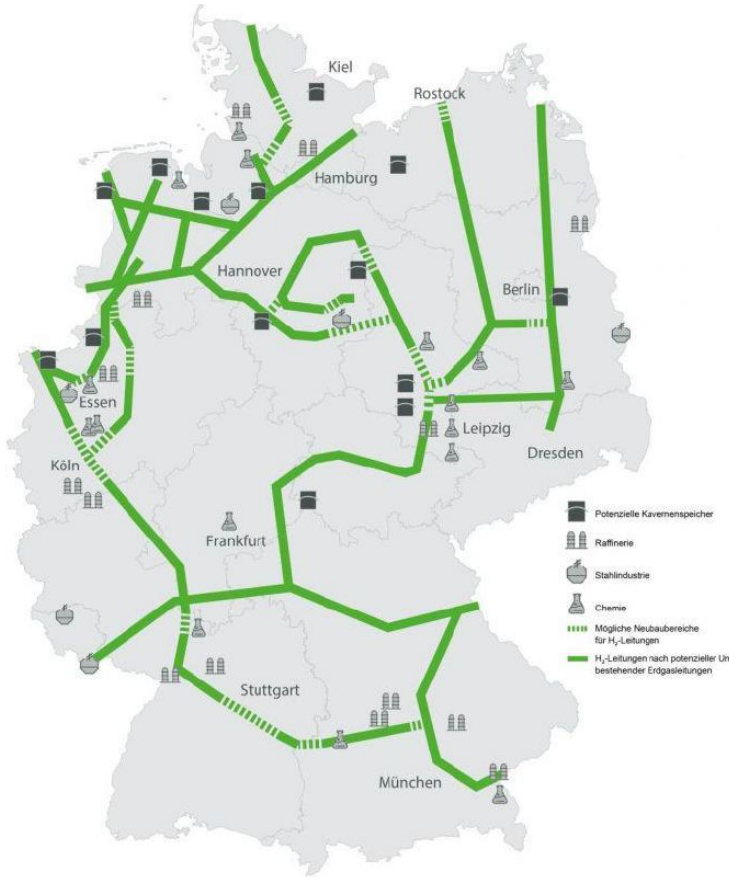
Energy Port I IPCEI Projects

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

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Doing hydrogen | IPCEI Projects

- Rededication of the natural gas pipeline
- “European Hydrogen Backbone”
- Electrolysers along the pipeline



DIE ROSTOCKER
WASSERSTOFFINITIATIVE

H2erO

Communal transport fleet

- Order of 52 H_2-buses
- 2 filling stations
- Sector coupling
- Total costs : 41,8 Mio. € | Subsidues: approx. 18 Mio. €

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

Research Factory Hydrogen MV

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

DIE ROSTOCKER
WASSERSTOFFINITIATIVE

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 Wikinger and currently for Arkona Becken.
- Work is currently underwayto 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
Olaf Fiesel, Head of Unit, Unit for Spatial Development of Energy, Infrastructure and Transport
Renewable Energies
Telephone +49 385 588-15510
olaf.fiesel@em.mv-regierung.de

www.mecklenburg-vorpommern.de