Mecklenburg-Vorpommern
Ministerium für Wirtschaft, Infrastruktur, Tourismus und Arbeit

Change happens locally: Regional governments driving offshore wind and hydrogen innovation

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Mecklenburg-Western Pomerania
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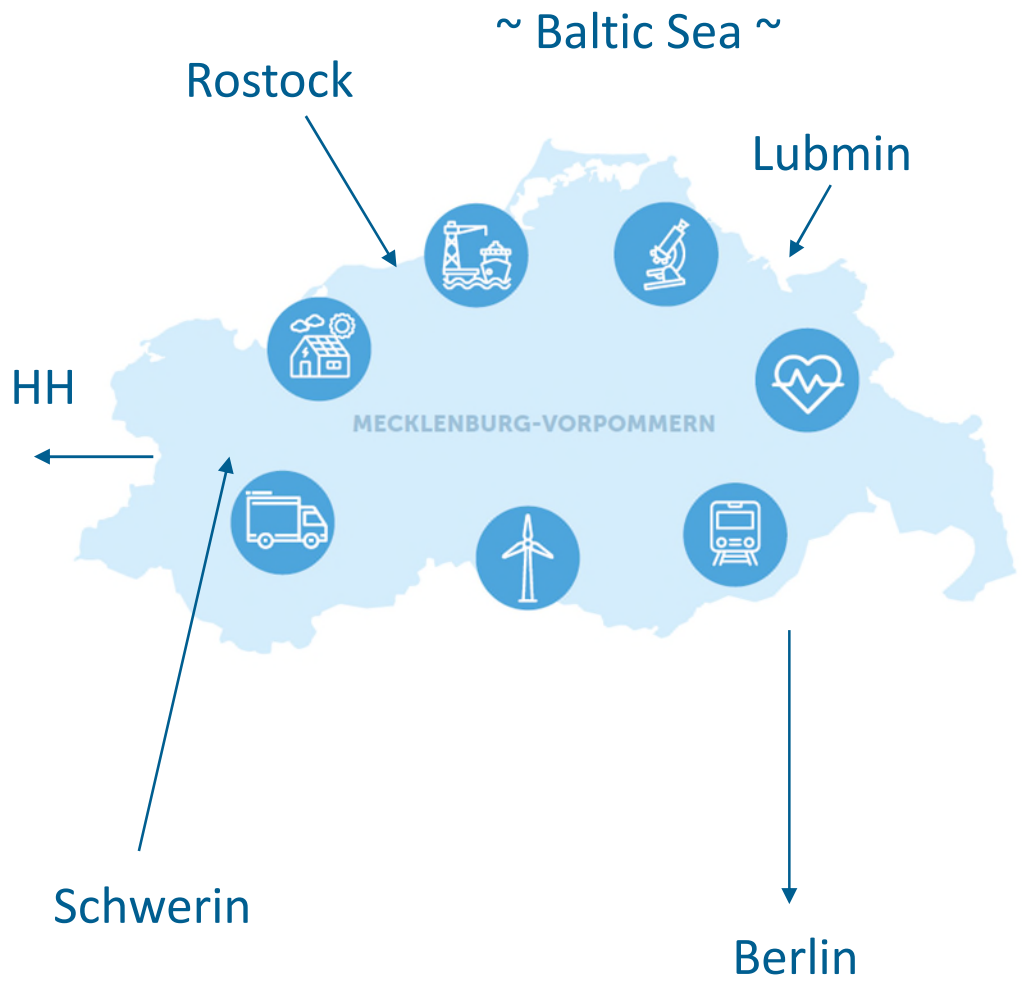
Mecklenburg Western-Pomerania and the Baltic Sea



Coalition Agreement MV 2021 - 2026

The coalition partners want to strengthen Mecklenburg-Western Pomerania's foreign trade relations with a particular ***focus on the Baltic Sea region****.*
We are striving for closer cooperation, particularly in the areas of renewable energies, the hydrogen economy and a ***CO_2-free Baltic Sea.***

The coalition partners will promote the strategic cultivation of the ***partnership with all neighbors in the Baltic Sea region*** *in the Baltic Sea Parliamentary Conference and via the Baltic Sea Parliamentary Forum.*

Mecklenburg-Western Pomerania | Baltic Sea Strategy

- MV is deeply integrated into the Baltic Sea region, with a **focus on active cooperation**
- **Strong partnerships** in infrastructure, **energy**, healthcare, and research position MV as a key player in regional collaboration
- MV faces **major challenges**, including the geopolitical situation, climate transition, and demographic changes, emphasizing cooperation without Russia.
- **Key goals** include fostering innovation, sustainability, and shared values, while developing the cross-border Szczecin metropolitan area.

MV-Ostseestrategie

Menschen verbinden. Potentiale entfalten.

The State Government's action plan

3.3.1 Expansion of offshore wind energy and cross-border grid linking

3.3.2 Development of a regional hydrogen infrastructure

MV Baltic Sea Strategy | 3.3.1 Offshore Wind Energy and Meckl.-Western Pomerania’s Role

- Government supports the "**Berlin Declaration**" (May 2023), focusing on offshore wind energy expansion and cross-border energy cooperation.
- Key goals include better **integration of electricity grids and collaboration with Baltic Sea states and Norway**.
- MV is positioned as **a key hub for energy partnerships in the Baltic Sea region**.
- **Offshore wind energy** is crucial for a climate-friendly energy supply, with plans to strengthen cooperation.
- **Ongoing projects** include the "Kriegers Flak" (with Denmark) and "Hansa Power Bridge" (?) (with Sweden) led by 50Hertz.
- **Future projects**, like the "Bornholm Energy Island" and "Baltic Wind Connector“, offer new opportunities for renewable energy collaboration in the region.

MV Baltic Sea Strategy | 3.3.2 Development of a Regional Hydrogen Infrastructure

- **Hydrogen** is essential for the future energy economy and decarbonization. Its production, storage, transport, and use require international cooperation.
- Projects like **BOWE2H** help stakeholders navigate guidelines, networks, investments, and research frameworks for offshore wind and hydrogen.
- **Key Objectives, i. a.**:
  - Develop cooperation in the Baltic Sea region and establish MV as a key hydrogen hub.
  - Host an international **hydrogen conference in Stralsund** to connect research, science, and business.
- Develop a **cross-border hydrogen network** via Baltic Sea ports, linking key infrastructure and industrial centers.
- Efforts will focus on improving conditions for **hydrogen research labs** and furthering regulatory frameworks at federal and European levels.

Offshore Wind Energy in Meckl.-Western Pomerania

- **Status quo: wind farms in operation, in construction and planned projects**
- **Key objectives of the government**

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

Renewable Energies in Mecklenburg-Western Pomerania

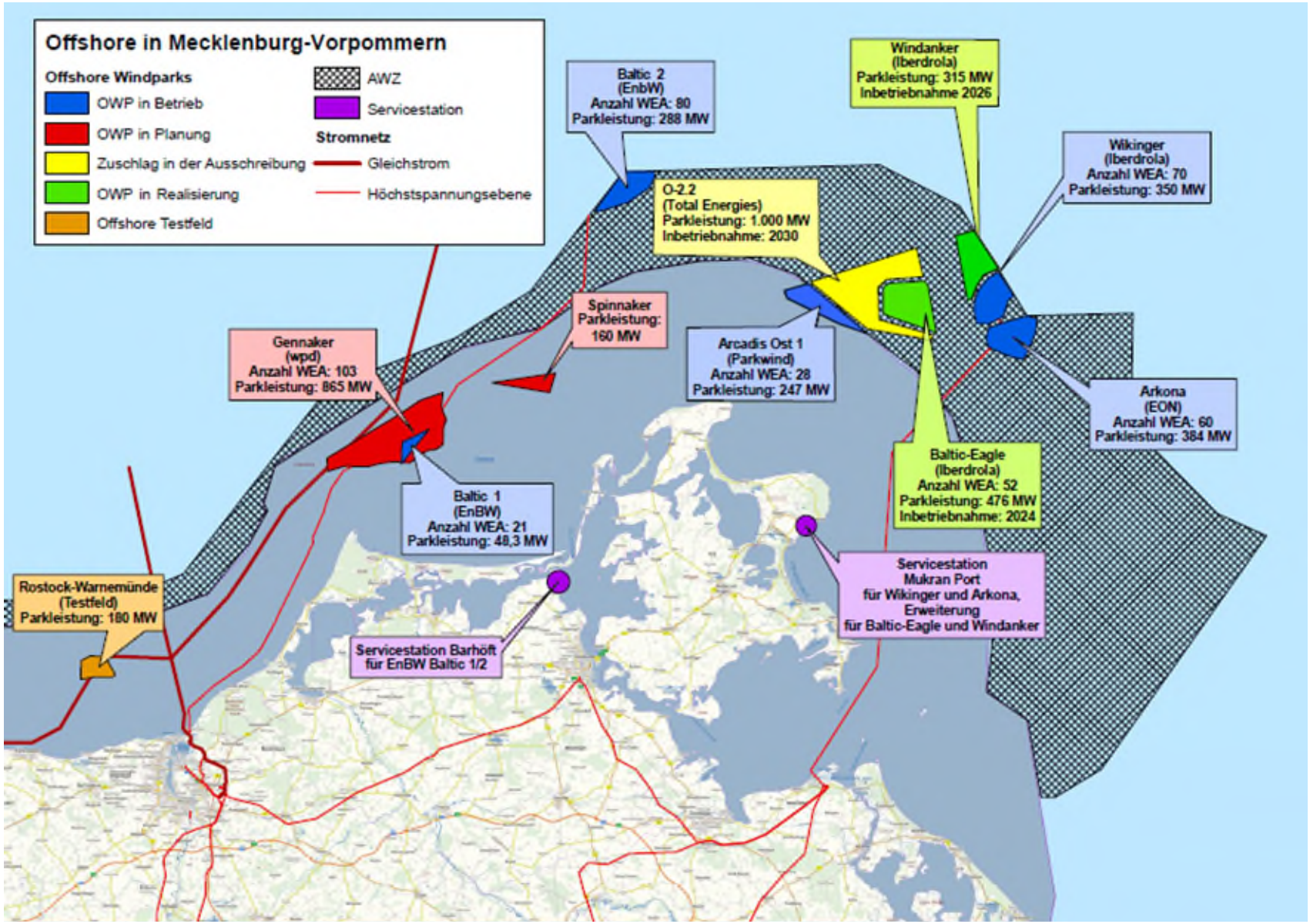
- **82,3 %** of the electricity generated in MV from renewable energy sources (54 % wind, 13,1 % biomass, 15,1 % Solar), approx. 15.7 GWh [2022]

- Installed capacity approx. **8.4 GW** [2024]

- **Wind energy in MV**: approx. **3.8 GW onshore**, approx. **1.4 GW offshore**
  - OWP Baltic 1 (48,3 MW, 2011); OWP Baltic 2 (288 MW, 2015)
  - Arcadis Ost 1 (257 MW, 2023)
  - Wikinger (350 MW, 2018)
  - Arkona (384 MW, 2019)
- **Additional capacity expected in the next years (offshore)**
  - Baltic Eagle (476 MW)
  - Gennaker (927 MW)
  - Windanker (300 MW)
- **Offshore Test Field Rostock-Warnemünde**

- MV already has achieved a **renewable share of > 200 %** of its own electricity demand (largest share of renewable energy sources in Germany)

Offshore Wind Parks in Meckl.-Western Pomerania



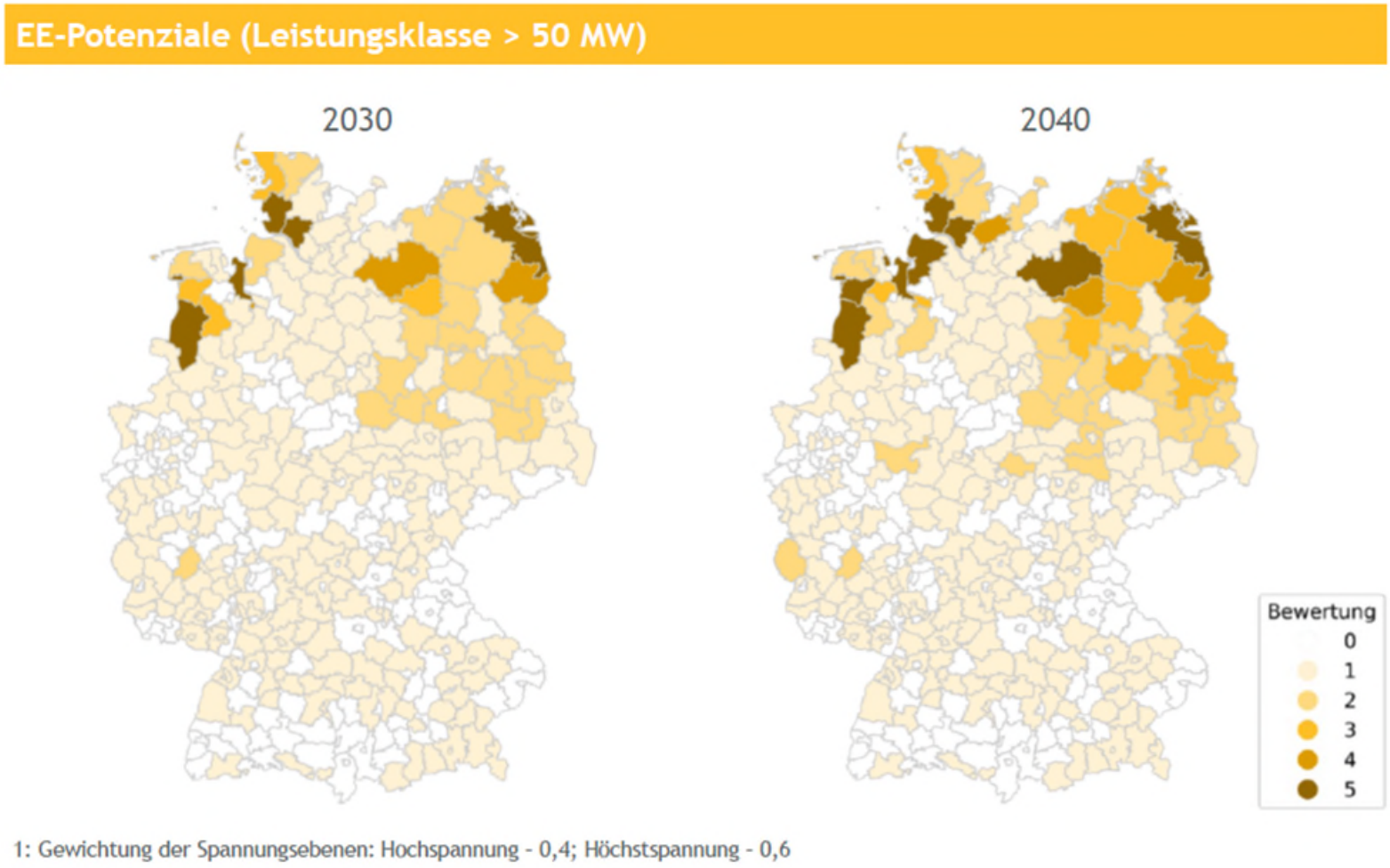
Offshore Goals in the Coalition Agreement MV 2021 - 2026

- 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) - climate neutrality in **2040**
- 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

Hydrogen in Mecklenburg-Western Pomerania

- Prerequisites
- Key objectives of the government
- Hydrogen Core Network/Grid
- IPCEI/Lubmin
- Import Corridor Baltic Sea
- Hydrogen Strategy MV

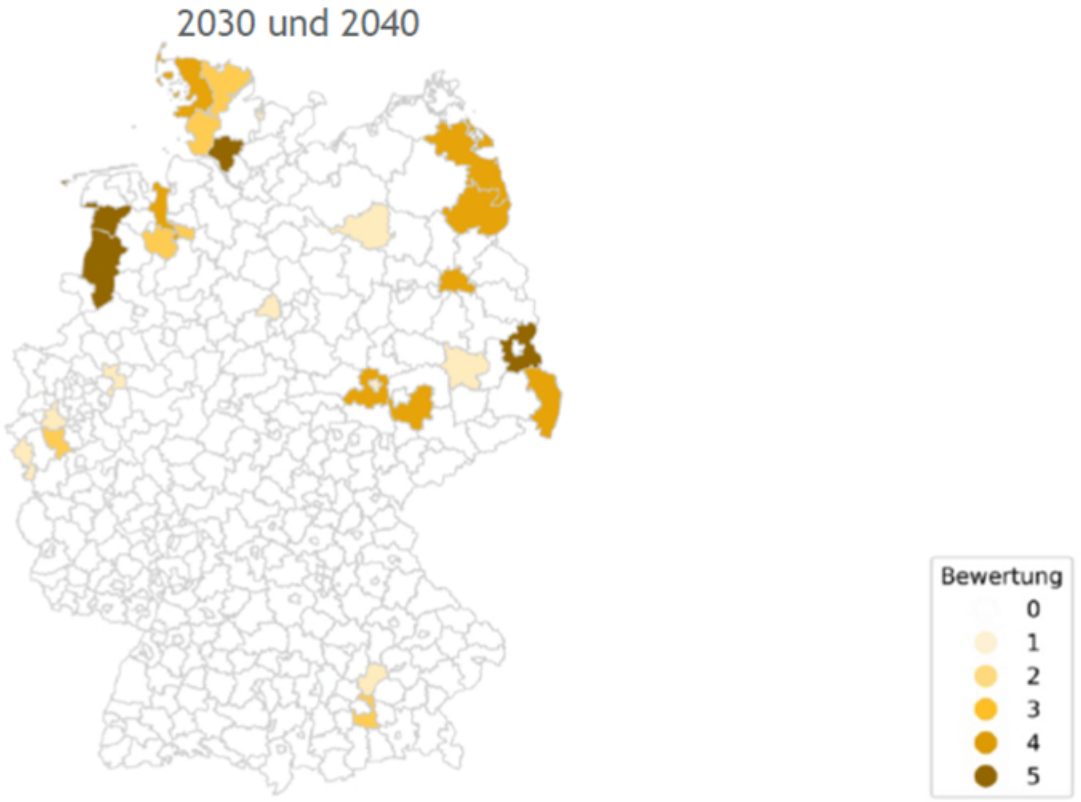
Renewable Energy Potential (power class > 50 mw)



source: EWI-EON-Thüga Abschlussbericht: Standortbewertung für systemdienliche Elektrolyseure, June 2024

Redispatch

Redispatch

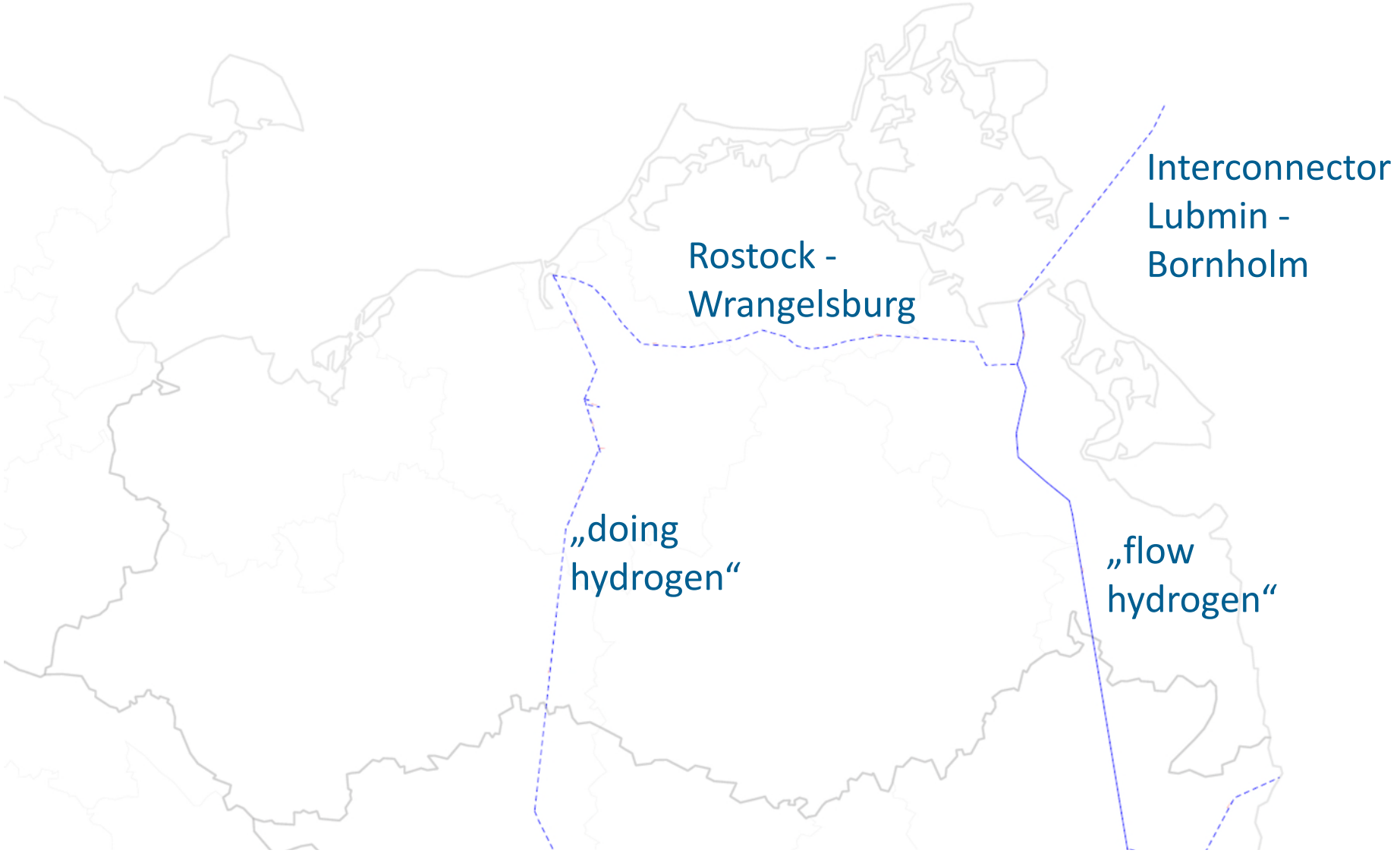


source: EWI-EON-Thüga Abschlussbericht: Standortbewertung für systemdienliche Elektrolyseure, June 2024

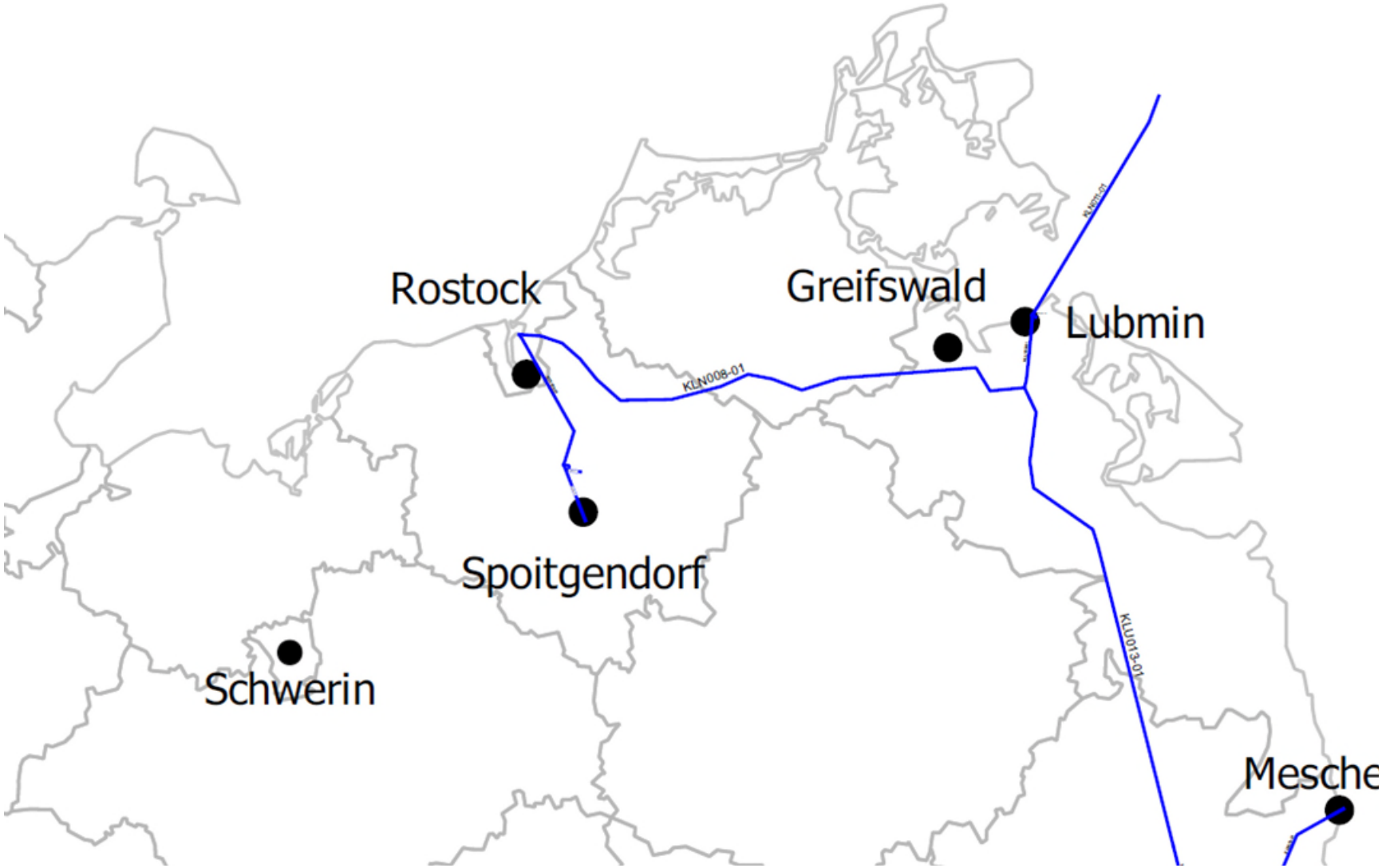
Hydrogen Goals in the Coalition Agreement MV 2021 - 2026

- […] create good framework conditions for more well-paid industrial **jobs in a climate-neutral (hydrogen) economy**. New economic prospects are opening up for MV, particularly through the further expansion of renewable energies and the development towards a climate-neutral hydrogen economy. […] The aim is also to create industrial jobs with corresponding potential in the use of hydrogen as part of the **North German hydrogen strategy**.
- [...] network the industry along the entire value chain of the onshore and offshore industry for the industrial use of hydrogen applications and want to implement the **IPCEI projects** [...]
- In particular, […] support the **ports of Rostock and Sassnitz-Mukran** in their development into industrial locations for the use and production of hydrogen from renewable energies.
- We will continue to consistently **support research into hydrogen production** and use in the state.

H2-Core Network/Grid, FNB draft 15 Nov 2023



H2-Core Network/Grid, FNB draft 22 Jul 2024



H2-Core Network/Grid, FNB draft 22 Jul 2024

intergration of renewable energies?

regionally balanced?

security of supply?

MV's proposal for the H2 core network

Important Projects of Common European Interest

HyTech Port of Rostock

- 100 MW electrolyser
- Scalable to 1 GW

Electrolysis ENERTRAG

- 55 MW electrolyser
- Incl. petrol station

GrueH2Ro (APEX)

- 100 MW electrolyser
- Up to 7,000 tonnes of H2 p.a.

Doing hydrogen

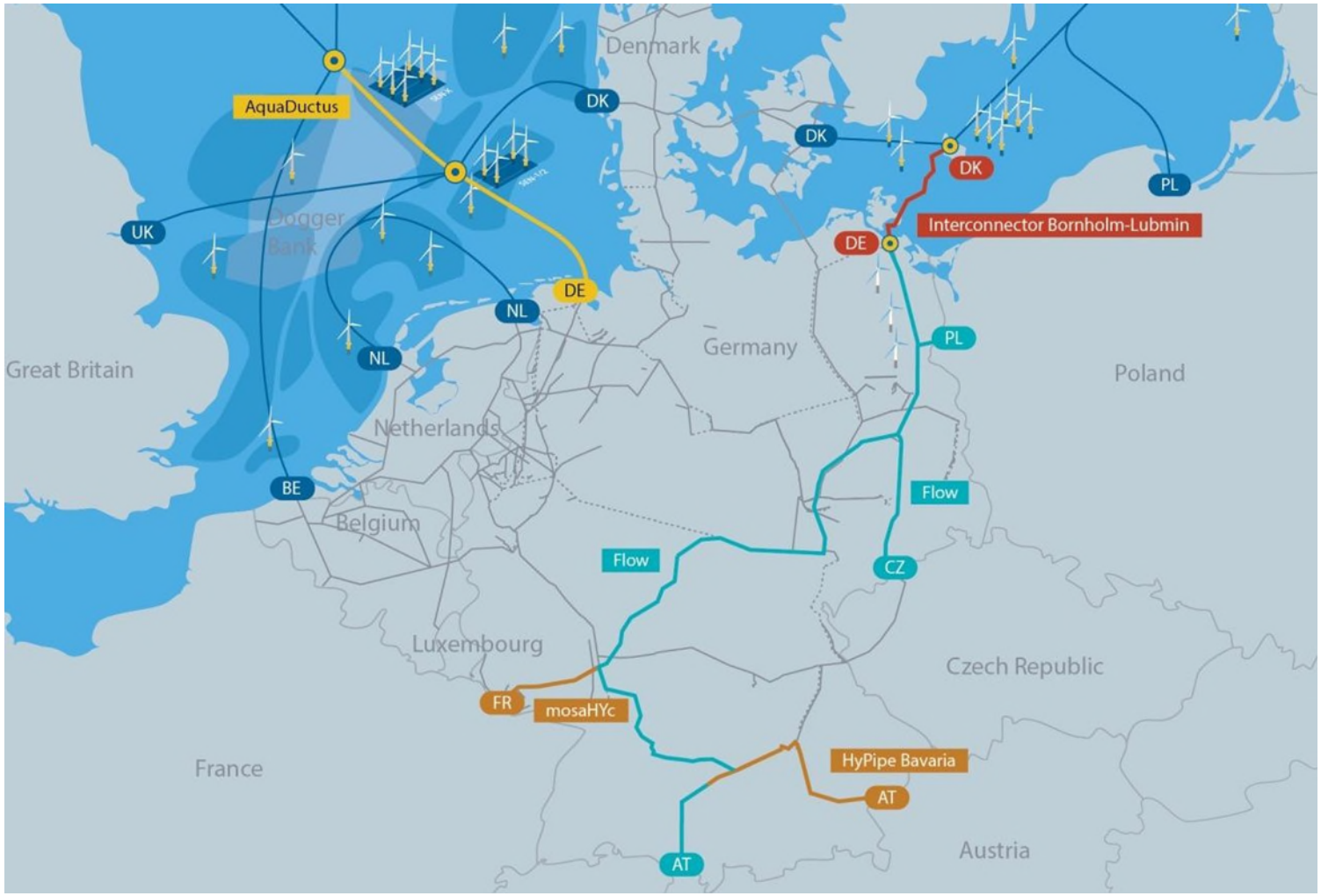
- Rostock – Glasewitz/Ketzin pipeline
- Connection of the electrolysers

doing hydrogen

Planned electrolysis projects in Lubmin (total output approx. 4 GW)

Bildquelle: PtX Development GmbH

„Flow“ Hydrogen Pipeline



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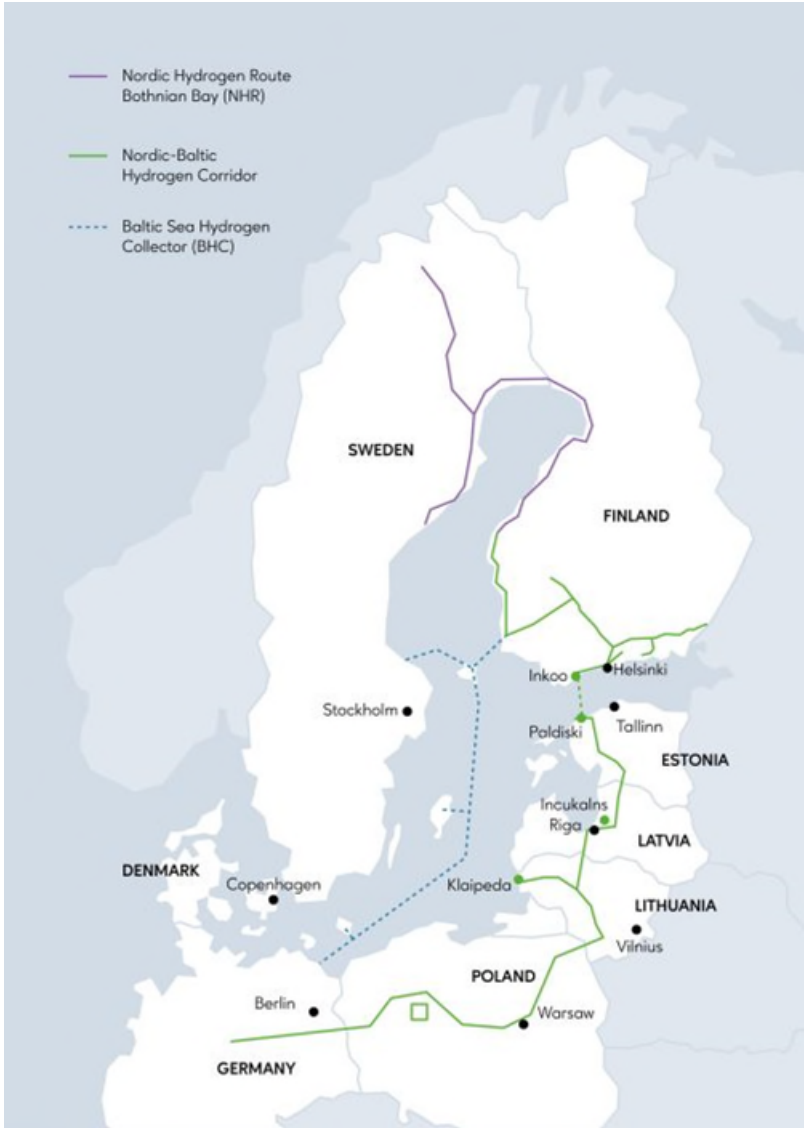
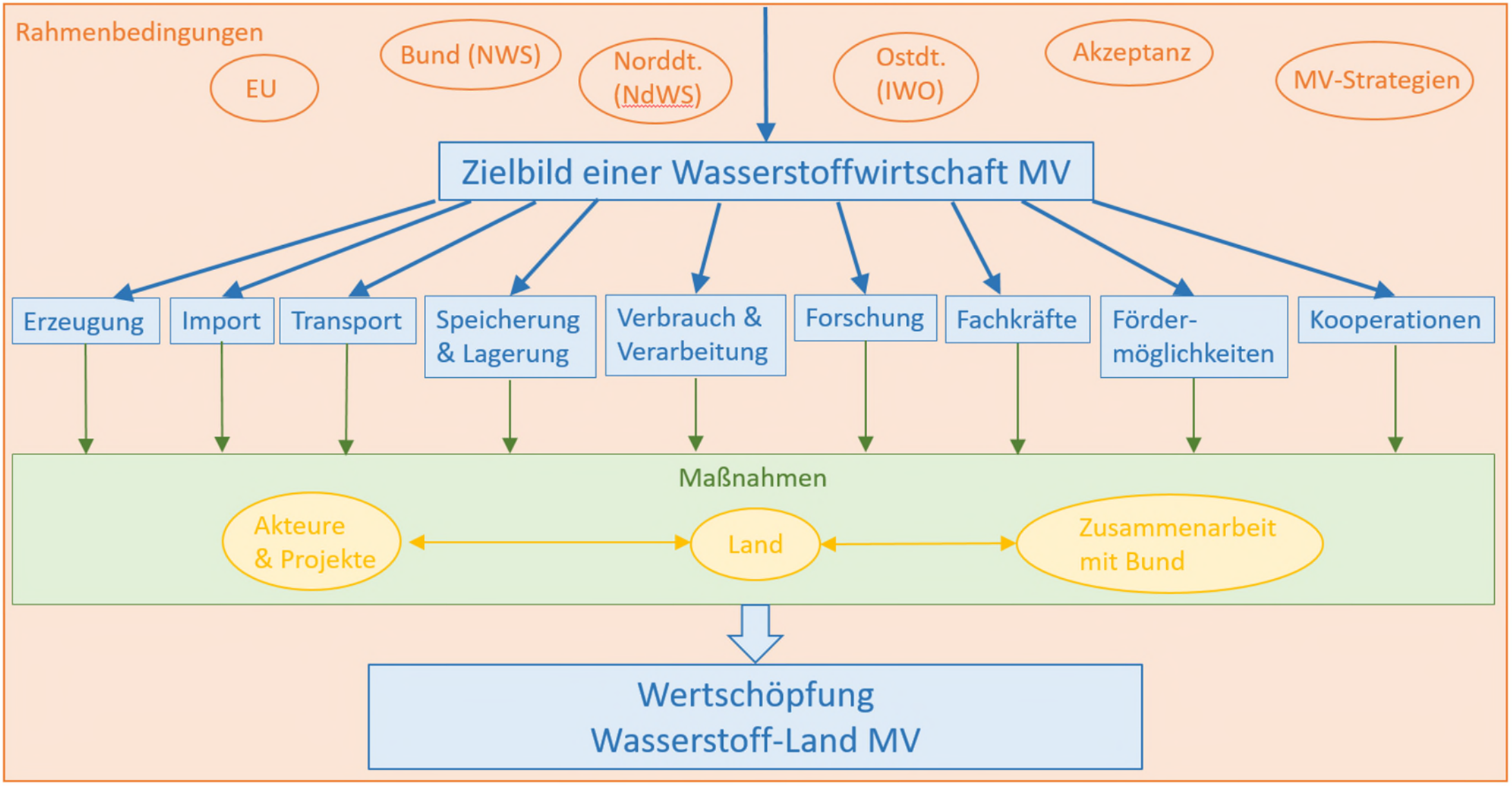
Import Strategy of the Federal Government, July 2024



source: gasgrid.fi

Wasserstoffstrategie MV



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Thank you for your attention

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