The energy market in the Baltic Sea region: Policy and vision of the EU

Regional offshore wind and green hydrogen in the Baltic Sea

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BEMIP High-Level Group

- BEMIP (2008) is the most advanced of the HLG set-up in the infrastructure area - example for the others;

- The **2009 MoU and Action Plan** – we have achieved the creation of an integrated power market between the Baltic States and the Nordic Countries as well as electricity interconnectors, with gas and electricity infrastructure projects added later;

- BEMIP - effective platform for **enhanced regional cooperation** - delivered tangible results: implementation of several critical gas and electricity infrastructure projects and mobilizing EU financial support.

The reinforced BEMIP High-Level Group

MoU (2015) extended the scope of BEMIP to security of supply, energy efficiency, renewables and the de-synchronisation of the Baltic States' electricity grid from the Russian and Belarusian systems;

June 2015 - the BEMIP HLG agreed on **a new Action Plan** which complemented the reinforced MoU by laying down specific objectives to be achieved within each of the BEMIP areas; The 2015 BEMIP Action Plan is common with the Policy Area Energy in the European Union Strategy for the Baltic Sea Region reflecting the need for coordination and for exploiting the synergy between the two initiatives**.**

BEMIP HLG Action Plan **– April 2021 addressing offshore wind**

Offshore wind cooperation

- Study on Baltic offshore wind energy cooperation under BEMIP was completed in June 2019:
- Substantial potential in the Baltic Sea (at least 93 GW) especially in the Southern part;
- Scope for better utilization of the most attractive sites for offshore wind power through a cooperative, regional approach;
- Additional benefits can be realized by integrating the cooperation on offshore wind power in regional grid planning: substantial efficiency gains.

Figure 5-5 Configuration of the four advanced offshore hubs

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Offshore wind cooperation

- BEMIP Members at ministerial level and the Commission endorsed a Declaration of Intent regarding Offshore Wind development in the Baltic Sea on 30 September 2020.
- A new BEMIP Offshore Wind Working-group was created and became immediately operational.
- Offshore Wind Work Program of the BEMIP Offshore Wind Working-group was finalised and endorsed on 28 October 2021:
  - Coordinated offshore Grid;
  - Maritime Spatial Planning focusing on offshore wind development;
  - Cooperation on enabling appropriate financing;
  - Acceleration of specific Baltic offshore projects and permitting.

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Baltic Sea Energy Security Summit

- Summit on Energy Security in the Baltic Sea – 30 August in Denmark;
- Brought together President von der Leyen, Commissioner Simson, Prime Ministers, Presidents and Energy Ministers from Germany, Poland, Lithuania, Latvia, Estonia, Finland, Sweden and Denmark.
- New impetus for cooperation under the BEMIP HLG with the aforementioned EU member states and the EU signing the Marienborg Declaration:
- *to speed up the phase-out of Russian energy,*
- *to increase offshore wind energy capacity by nearly seven times over the next eight years (19.6 GW by 2030),*
- *to replace Russian energy with increased imports of liquefied natural gas, and*
- *to explore joint cross-border renewable energy projects and identify infrastructure needs to enable the integration of renewable energy.*

Implementation of the offshore strategy (2020)

- **Pact for Skills**: large-scale skills partnership on offshore renewables
- Working group on offshore RES under the **Clean Energy Industrial Forum**
- **Horizon Europe** calls in support of the strategy, and other EU funding instruments
- Setting up a **SET Plan**

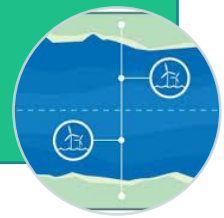
Industry, Value Chain, Jobs and Research & Innovation

- Tracking progress on **implementation of MSP Directive**
- Establishing a **Community of Practice on MSP**, and a European Blue Forum for dialogue between sea users
- **Guidance document** on wind, energy development and EU nature legislation

Maritime Spatial Planning (MSP)

- **Revised TEN-E**: integrated offshore grid planning; sea basin one-stop shops for permitting
- **Revised Renewable Energy Directive**, raising renewables target to 45% by 2030
- Preparing a **Guidance on Cost Benefit Analysis** for joint renewables and cross-border projects

Grid and Market Framework



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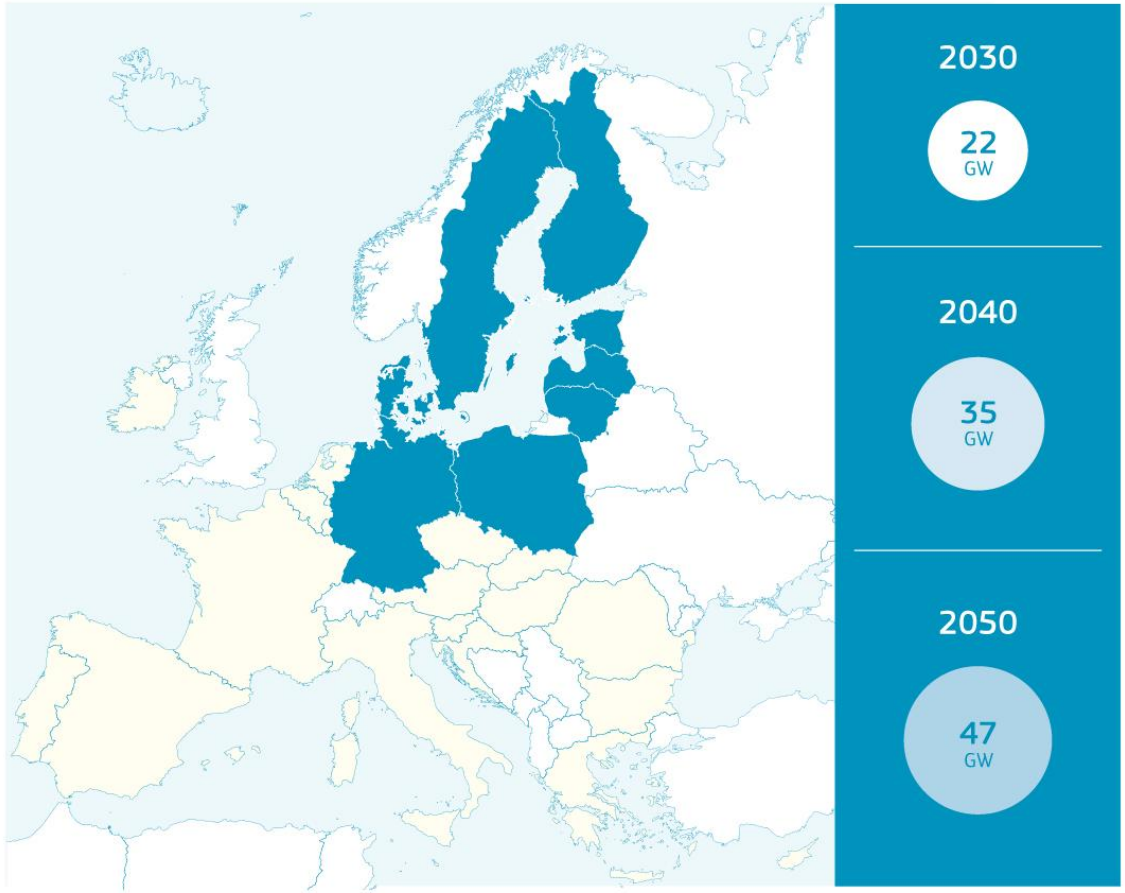
New TEN-E Regulation – offshore provisions

- The TEN-E operationalizes the ambitions in the EU Strategy for Offshore RES by including:
  - New infrastructure categories for hybrid offshore grid projects and offshore radial lines to implement five offshore priority corridors across the EU; where appropriate, hydrogen projects can also be included;
  - Offshore grid planning provisions;
  - Enhanced regulatory tools;
  - Permitting provisions to accelerate implementation to facilitate scale-up of offshore grids to the objective of 300 GW in 2050.

Non-binding agreements on goals for offshore renewable generation

- The **Offshore Renewable Energy Strategy** highlights the need to reach at least 300 GW of offshore wind and 40 GW of ocean energy by 2050 in the EU as a key means to reach climate neutrality.
- **REPowerEU**: need to accelerate the roll out of offshore renewable energy to reduce EU's dependence on fossil fuels and minimize future energy price risks
- **TEN-E requirements** that Member States, with the support of the Commission, conclude a non-binding agreement to cooperate on goals for offshore renewable generation to be deployed by 2050 within each sea basin by 2050, with intermediate steps in 2030 and 2040.
- **Non-binding agreement** without prejudice to the right of Member States to develop projects on their territorial sea and exclusive economic zone
- By 24 January 2024, the ENTSO for Electricity to develop and publish **high-level strategic integrated offshore network development plans**.

Baltic Energy Market Interconnection Plan offshore grids (BEMIP offshore)



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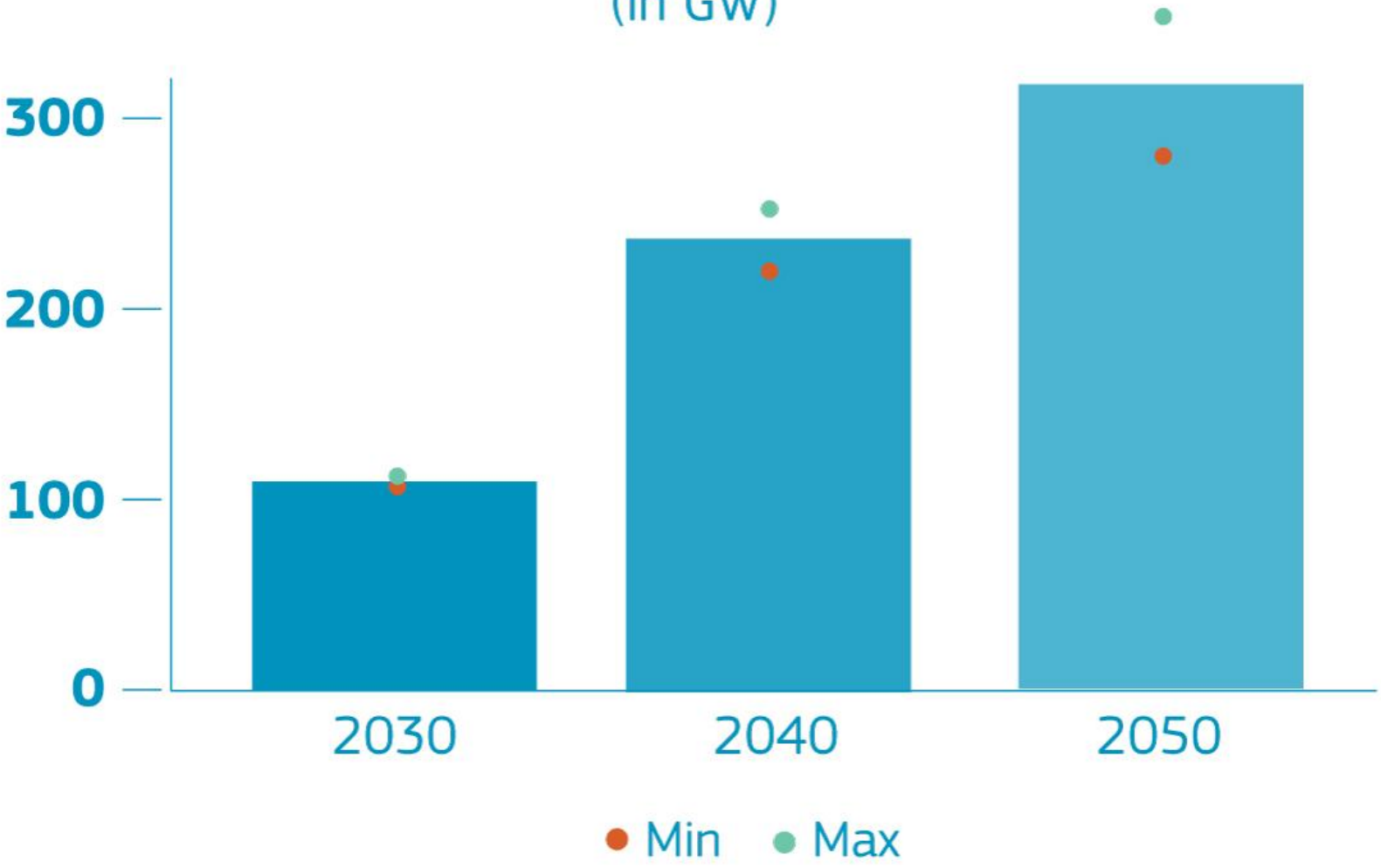
Baltic Energy Market Interconnection Plan offshore grids (BEMIP offshore)

Member State	Goal 2030 (GW)	Goal 2040 (GW)	Goal 2050 (GW)
Denmark[5]	7.9	7.9[6]	7.9[7]
Germany[8]	4.1	4.1	4.1
Estonia	1	3.5	7[9]
Latvia	0.4	0.4	0.4
Lithuania	1.4	2.8[10]	4.5[11]
Poland	5.9	10.9	10.9[12]
Finland[13]	1	5	12
Sweden[14]	0.7		
Total for BEMIP priority offshore grid corridor	**22.5**	**34.6**	**46.8**

Non-binding offshore renewable energy goals in the EU

(in GW)



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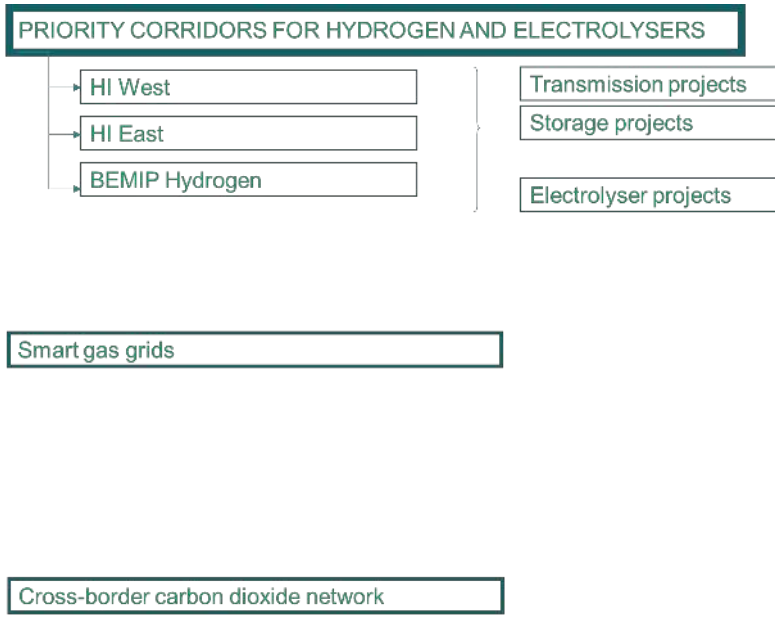
Offshore grid planning provisions

Beginning 2024:

Based on MS non-binding agreements, **high-level strategic integrated offshore network development plans** will be developed for each sea basin:

- Providing a high-level outlook on offshore generation capacities potential and resulting offshore grid needs, including the potential needs for interconnectors, hybrid projects, radial connections, reinforcements, and hydrogen infrastructure;
- Developed by the ENTSO for Electricity with the involvement of the relevant TSOs, the national regulatory authorities, Member States, of the Commission;
- In line with the non-binding agreements taking into account environmental protection and other uses of the sea;
- Updated every two years.

New gases under the TEN-E Regulation



- Exclusion of natural gas infrastructure* and oil pipelines;
- Inclusion of new and repurposed dedicated hydrogen networks and electrolysers above 50 MW;
- Tapping into locally produced renewable and low-carbon gases (biogas, biomethane) through IT-focused smart gas grids installations allowing for reverse flows.

**with the exception of i) a transitional period allowing for blending in dedicated hydrogen assets converted from natural gas assets and ii) a derogation for Malta and Cyprus limited in scope and time*

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Hydrogen and electrolysers

Eligible types of H2 infrastructure:

- dedicated H2 pipelines, as well as repurposed natural gas infrastructure assets;
- Storage;
- Reception, storage and regasification or decompression for liquefied hydrogen;
- Installations allowing for H2 or H2-derived fuels use in transport.

Eligible types of electrolysers:

- Capacity of 50MW met by a single or a set of coordinated projects;
- Life cycle GHG emissions savings of 70%;
- Network related function.

RePower EU Plan

- **Diversifying** energy supplies away from Russia and towards more reliable suppliers (eg USA, Azerbaijan, Israel, Egypt, Norway, Algeria).

- Ensuring we are **prepared** for further disruption by Russia: We asked MS to reduce demand, while ensuring gas **storage** facilities are filled to at least 80% by November, and 90% thereafter. In November 2022, we reached 95%, exceeding the target. It stood at nearly 83% [82.6%] on 12 January 2023. Our immediate priority is to coordinate storage filling ahead of next winter 2023/24.

- **Speeding up the clean energy transition**: eg proposed higher targets (eg renewables and energy efficiency) to meet climate goals; we are making it faster and less complex to acquire permits for investing in renewables projects and related grids; and we are giving a huge push to invest more in solar energy, hydrogen, wind and bioenergy, for instance.

The way ahead for hydrogen

- The REPowerEU plan to provide 10 million tonnes of domestic renewable hydrogen and 10 million tonnes of imported renewable hydrogen will require infrastructure to bring large volumes of hydrogen to the end-consumers.

- The Commission will work with Member States, regulators and project promotors in regional groups to come up with the first list of Projects of Common and of Projects of Mutual Interest under the revised TEN-E Regulation by the 4th quarter of 2023 (entry into force in early 2024).

- Discussions on regional hydrogen needs have started with the meetings in December and last week on 8 February.

Thank you

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