



Minutes of the 2nd Thematic Working Group Seminar

Market and Supply

„Which are the new markets in the Baltic Sea Region?“

Wednesday 18th April 2018 from 16:15 to 17:30

Rostock

Venue: HanseMesse Rostock

Host: Wind Energy Network in cooperation with Rostock Business

Materials: Presentations

Speakers:

- Gert Proba, Rostock Business and Technology Development GmbH
- Mariusz Wójcik, Foundation for Sustainable Energy (FNEZ)
- Anni Mikkonen, Finnish Wind Power Association
- Pierre Ståhl, Energy Agency Southeast Sweden

Welcome and introduction

Gert Proba from Rostock Business and Technology Development GmbH welcomed the participants and gave a short introduction about the thematic working group seminar and the project Baltic InteGrid.

Offshore Wind Energy in Poland – the next Baltic Sea market?

Mariusz Wójcik, Project manager at FNEZ presented the situation of offshore wind energy in the South Baltic Sea region with an emphasis on Poland. In doing so, he highlighted the following:

- 40 GW – energy potential of the Baltic Sea (10 GW until 2030)
- South Baltic – main area for offshore wind energy development in the Baltic Sea
- Poland – one of the key markets until 2030
- After 2030 – new market in Sweden and the Baltic states will be unlocked

Actual demand for peak capacity in Poland:

- Summer peak 22,7 GW
- Winter peak 26,2 GW
- Forecast of growth of demand for peak capacity in 2030 + 25%

He outlined specific locations with offshore wind energy potential in Poland:

Three potential regions for offshore wind energy developments:

- “Central Bank” Region-1.8 GW
- “Odra Bank” Region-1.8 GW
- “Słupsk Bank” Region -4.4 GW



He informed that an area of 2,500 km² is dedicated for offshore wind farm developments based on a draft of spatial plan for maritime areas. Further, the forecasted density is 4 MW/km² – (conservative approach) whereas the real market potential in the perspective of the year 2035 is 8 GW.

When it comes to the supply chain, there is a high interest of international companies in the Polish market which also leads to high competition. In parallel, there is a relatively high share of companies located in Poland which could also be active in Poland in the future.

During the discussions questions were raised concerning the status of onshore grid connections and the regulatory framework. Mariusz pointed out that the first offshore wind farms will need subsidies, but after 2027 there will be no more needed, assuming that the investors do not need to take care of the grid connection (export cable).

Finland's first offshore wind farm is in the water—how to continue?

Anni Mikkonen, CEO of the Finnish Wind Power Association talked about the first offshore wind farm (Tahkoluoto offshore wind farm) in Finland. The wind farm operated well during the winter 2017/2018. In Finland the sea freezes every winter (drifting and packed ice), so Tahkoluoto is designed for challenging ice-conditions. The wind farm started production in autumn 2017. The estimated annual production is 155 GWh.

She presented some basic facts about the wind farm:

- 10 x 4,2 MW
- hub height 90 meters
- rotor diameter 130 m
- distance from shore 0,5 – 3 km
- water depth: 8-15m





The total offshore capacity in Finland is between 44 and 77 MW, with 27 MW on artificial islands. Only big players (utilities, large project developers) are involved in the offshore wind farm industry in Finland. A lack of political will has slowed down the interest towards offshore wind energy in Finland. Furthermore, many suitable onshore sites are available and there is competition with PV and biogas.

The target for 2020 is that 38 % of energy consumption is covered with renewables. In November 2016 the energy and climate strategy was updated, defining that 50% of the energy consumption has to be covered with renewable energy by 2030 and 55% of energy consumption has to be covered with domestic energy sources by 2030.

Currently, no new offshore-specific support scheme is planned. What would be needed are

- i) a steady investment environment – several auction rounds
- ii) a developed supply chain starting from vessels, harbour infrastructure, etc.

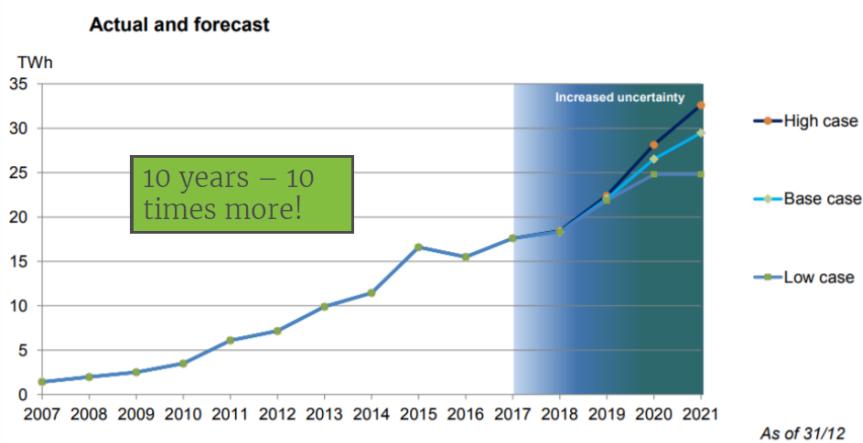
Cooperation within the Baltic Sea Region is the best option for Finland for offshore wind energy development.

Focus offshore wind Sweden and outlook for an offshore grid until 2050

Pierre Ståhl, Project Manager at the Energy Agency Southeast Sweden presented the vision 2050 for the offshore wind in Sweden. He quoted the government's ambitions for the future of its energy system: "Sweden is aiming to be one of the world's first fossil-free welfare nations". The Swedish government determined in the energy agreement 2016 the following goals for 2040:

- 100% renewable electricity production
- No forced closing of nuclear power
- Extended support to renewables 2020-2030
- Offshore Wind Energy – Cost for Grid connection should be removed

Wind power production





Today there are 76 offshore wind turbines in Sweden, which produce 172 MW. But Sweden has a technology-neutral support system, thus the market decides which projects/technologies will be realized in the future. Clear rules on grid connection costs are needed.

Pierre concluded with the offshore wind vision in the Baltic Sea in the year 2050 summing up to 35 GW / 150 TWh electricity.

Wrap up of the TWG Seminar Market and Supply

Gert Proba wrapped up the session by thanking the speakers and participants. The insights given into the developments of offshore wind energy in the different countries are showing that there is a lot happening in the Baltic Sea region in this respect. The results of the studies in the Baltic InteGrid project delivers proof of these positive developments but also points towards gaps for instance in legislation and cooperation, which must be overcome. Around 100 participants in this TWG seminar are also pointing towards the demand for knowledge and interest in offshore wind energy in the Baltic Sea region, which the Baltic Offshore Grid Forum (BOGF) addresses with its events and will continue to do so beyond the end of the project in 2019.