

Minutes of the Country Workshop “Offshore Wind Energy Infrastructure: Opportunities and Challenges in Latvia”

15 May 2017, Riga, Latvia

Venue: Mercure Riga Centre hotel (101 Elizabetes Street, Riga)

Host: Latvian Association of Local and Regional Governments (PP9)

Material: see attached presentations

Participants: see attached list of participants

WELCOME & INTRODUCTION

Dr. Andris Akermanis (PP9) opened the workshop and welcomed all participants in Riga, followed by a short presentation introducing participants to the current energy issues in Latvia. He pointed out that Latvia will reach its renewable energy targets by 2020 without any problems, however - without the share of offshore wind energy, although there is a good potential due to high wind speeds along the Latvian coastline.

Anika Nicolaas Ponder (LP) introduced stakeholders to the BIG project, its aims and main activities, as well as current state of the OWE in the Baltic Sea region and its further development through Baltic Offshore Grid, which the BIG project is striving for.

OVERVIEW OF RES ELECTRICITY IN LATVIA AND OWE PERSPECTIVE

Dzintars KAULINS | Director of Department of RES and Energy Efficiency | Ministry of Economics

Since there is very little to say about OWE in the Latvian case, Dzintars Kaulins gave a general overview on the current situation of renewable energy in Latvia.

Currently, Latvia is very close to the 2020 target of 40% share of renewables. The remaining 2,4% are to be reached through upcoming projects, such as building biomass plants in Riga. He told about the different types of renewables used in Latvia, the main ones being firewood and hydro resources. Wind energy, biogas, biofuel and biomass are consumed less commonly. About 70% of the electricity is produced by hydroelectric power plants that have been built in the Soviet times. With the State support in the last few years, there are more biomass and biogas cogeneration plants operating than it used to be previously.

He displayed the wind map of Latvia, which showed that highest speeds are in the western coast, which corresponds with the places, where first onshore wind farms have been built. If there are technical possibilities to build wind farms in the Baltic Sea then we are talking about this part of Latvia. This is also in line with an infrastructural line that is being built to connect the western part of Latvia to the central part.

After that Mr. Kaulins showed some statistical information on the wind energy:

- Assessed wind potential ~1,5TWh
- Support according to the Cabinet Regulation No.262:
 - a. 53 stations with total capacity 64,215MW;
 - b. In 2016 supported electricity amount 115,8GWh;
 - c. Issued licenses of support >50MW with planned electricity production 165 GWh;
 - d. No new licenses are being issued till 2020 under this regulation.

By 2030 Latvia would like to achieve at least 50% of energy from renewables. Looking at the tendencies in Europe, offshore wind could be one of the most promising energy sources, however it is expected that after 2020 it would be much more affordable than currently.

MARITIME SPATIAL PLANNING AND OFFSHORE ENERGY RESTRICTIONS

Kristine KEDO | Head of Spatial Planning Policy Division | Ministry of Environmental Protection and Regional Development

Kristine Kedo gave a presentation on what has been done so far in maritime spatial planning (MSP) in Latvia. She explained why such planning is needed.

Elaboration of first MSP draft started at the beginning of 2015. It has been a hard process due to many stakeholders with different views and expectations for this document.

Two major objectives have been defined by the ministry for OWE in the MSP:

- use of offshore energy shall be promoted by reserving a sufficient area for this kind of maritime use;
- offshore renewable energy shall not harm the viability of the marine ecosystem or cause substantial losses to other marine resources or users of the marine space.

She showed the first draft of the map where OW farms are planned only in two small areas in the western coast (total area 207 km²). These areas have suitable natural conditions:

- At the height of 100 m, wind speed is at least 9 m/s;
- Up to 30-50 m depth.

During the planning process, planners have also considered the areas for possible connections with OW farms. The ongoing terrestrial grid expansion (*Nord Balt* project's subproject *Kurzemes loks*) could be such a connection solution. By 2030 OW farms capacity could reach 850 MW.

Kristine Kedo also mentioned the importance of international cooperation in the process of MSP. In this context, she mentioned two projects - *Baltic Scope* and *Baltic Lines*.

She showed step-by-step, how the process is organized now in Latvia to receive license for construction of OW farm and how it will be improved with the help of MSP (please see presentations attached).

After the presentation, few questions were asked by the workshop participants. Main findings:

- The MSP is planned to be approved by the government by the end of 2017;
- Local governments are not particularly supportive to OWE in the coastal area due to nature conservation and cultural heritage interests.



OSW DEVELOPMENT OPPORTUNITIES IN LATVIA

Paulis BARONS | Board Member | Latvian Wind Energy Association

Paulis BARONS started his presentation with some facts on OWE in Europe. He showed daily wind (onshore and offshore) energy statistics from www.windeurope.org/daily-wind/, where the share of wind energy in electricity demand on that day was 12,9% and normally doesn't exceed 15%. He also showed some figures on economic benefits from the OWE industry in Europe, as well as map of Baltic Sea wind speeds, which shows that highest speeds in the whole Baltic Sea are near the Latvian coast (up to 9,8 m/s). He mentioned that OWE industry is growing every year, but unfortunately not in Latvia yet. Few years ago, there were two OWE projects in Latvia, which were canceled and investments went somewhere else. Paulis Barons admitted that Latvian legal system did not succeed to deliver the necessary conditions in this case.

He mentioned, if there are wind farms to be built in the Baltic Sea near Latvian coast then electricity could be transported to Estonia, Lithuania, Russia or Belarussia, and from Lithuania to Sweden. Latvia has a relatively good grid with 300 MW capacity, which is enough for OWE transmission.

Afterwards, Paulis Barons showed a picture of a offshore wind farm called *Veja Mate* (Germany), which is the Latvian name for *Mother of Wind*. With a stint of irony, he concluded that a project implementer, who probably was unable to implement OWE project in Latvia, has been able to do in Germany.

At the end of the presentation he explained why he thinks the OWE policy has failed so far in Latvia and the main reason for this could be the lack of "political will" to pursue offshore wind power. Latvia is importing electricity (around one third of total consumption = 2 TWh per year), which costs around 83 million euros. He concluded, it would be more cost effective to use this money for building wind turbines to generate 2 TWh and let the money stay in Latvia.

POSSIBILITIES AND POTENTIAL OF LATVIAN TSO OF OPERATION AND DEVELOPMENT OF WIND ENERGY IN LATVIA

Antons KUTJUNS | Head of International Development Projects' Division | AS Augstsprieguma tīkli (Latvian TSO)

Antons Kutjuns started his presentation with an introduction of the Latvian TSO *Augstsprieguma tīkli* (further on AST), which is responsible for secure and reliable energy provision from electricity producer to the consumer. The main tasks of AST are: transmission system operation and maintenance, reliable and effective electricity market operation, balance of the power system, and power transmission system development and integration with neighboring countries.

AST has 19 electricity transmission service users, where one of them is an onshore wind farm. The Latvian power system is connected with 6 alternative current interconnections: 2 with Estonia, 4 with Lithuania and 1 with Russia. The total installed capacity is 2982 MW, where more than half of it is based in the cascade of Daugava river producing energy by three major hydropower plants; 40% is produced from combined heat and power plants, and only 2% is produced by (onshore) wind power plants.

Andrejs Kutjuns highlighted that one of the main tasks of the TSO is to forecast Latvian electrical power system for 10-year period based on development plans defined by each type of electricity producer. Several development scenarios are then developed: conservative development, base scenario and optimistic development. In all scenarios, it is planned that installed wind capacity will grow from 2016 to 2030 (up to 600 MW in the optimistic scenario), however offshore wind energy is planned to start its development only after 2020. This is due to possible changes in the legislation and support scheme for RES, and the new infrastructure line *Kurzeme Ring* which is being developed, and through which offshore wind energy will be able to connect to the transmission network.

Based on TSO's technical policy, wind producers have following connection possibilities to the power network based on installed capacity:

- Distribution network – < 10 MW;
- 110 kV transmission network – 10-100 MW;
- 330 kV transmission network – > 100 MW.

Connection to the nearest substation must be constructed from developer's resources.

Andrejs Kutjuns also presented two maps - one showing the TSO's development plans before economic crisis (in 2008) and one – existing situation of development of transmission network (please see presentation attached).

He finished his presentation with main conclusions and once more pointed out that technical possibilities for RES connection to the transmission network in Latvia are sufficient.

INTERACTIVE DISCUSSION

At the beginning of interactive discussion each workshop participant introduced themselves and explained, what were their expectations from this workshop. Discussion followed.

Conclusions from discussion:

- Before new support scheme for wind energy (and other RES) in Latvia is developed (after 2020), there need to be an agreement signed at the state level which sets to what extent and by which conditions support will be provided;
- Latvia together with Lithuania and Estonia is planning to synchronize their power grids with the EU and disconnect from Russia (discussions on the political level are still taking place);
- Around 450 stakeholders from different sectors and governance levels were involved in the process of development of MSP's first draft. In the planning of the sea, there were largely requirements of shipping industry considered (56% of the sea is reserved for shipping), mostly due to fact that their share in the national GDP is 10%;
- Based on transitional rule in the Marine Environment Protection and Management Law, no new licenses are to be issued (nor offshore wind farms, nor aquaculture) until MSP is adopted (planned by the end of 2017);
- In other countries, such as Germany and Denmark, ports are open and keen to OWE projects in their region, not only for the operation and maintenance, but also for the

installation etc. There are many aspects on how ports and ship builders can benefit from OWE. It is advised to promote the positive aspects of OWE in Latvia to these industries, including fisheries and tourism;

- Germany has calculated that electricity demand will rise until 2050, so it is suggested for other types of energy producers in Latvia not to be afraid of OWE competition, because additional energy will need to be produced.