Appendix No. 1 to Decision No. 15/2025 of the Regional Director for Environmental Protection in Szczecin amending Decision No. 14/2021 on environmental conditions of 30 November 2021, ref. no.: WONS-OŚ.420.20.2020.KK.30

Characteristics of the Project consisting of the **construction of the FEW Baltic II Offshore Wind Farm**

The planned investment involves the construction of the FEW Baltic II Offshore Wind Farm with a power of up to 440 MW. The project will be implemented in the Polish exclusive economic zone (EEZ), approximately 55 km from land, near the Ustka commune (Pomeranian Voivodeship), with the shortest distance from the FEW Baltic II border to the Polish coastline equal approximately 51.2 km. The planned investment is situated in the central part of the Southern Baltic Sea, at the foot of the northern slopes of the Słupsk Bank.

The project aims to generate electricity from a renewable energy source, namely wind power. The kinetic energy of the wind is converted into the mechanical energy of the moving rotor. It is then transformed inside the generator into low-voltage alternating current, which is most often transformed to medium (33 kV) or high (66 kV) voltage for further transmission to a power substation using the inter-array cable infrastructure. After the voltage is increased in the transformers, the energy is evacuated to land via an export cable, ultimately to the National Power System (NPS).

According to the Decision No. MFW/5a/13 of the Minister of Transport, Construction and Maritime Economy of 10 July 2013, reference number GT7pb/62/29999/decision/2013, regarding the issuance of a permit for the construction and use of artificial islands, structures, and facilities in Polish maritime areas for the project entitled "Baltic II Wind Farm with associated infrastructure,", as amended by the Decision of the Minister of Infrastructure dated 20 October 2021 (ref. no.: GM-DGM-7.530.88.2021, and other decisions, the area of the water body designated for the FEW Baltic II Wind Farm is 41.25 km². As a migration corridor with a minimum width of 4 km, enabling birds to fly between the farm in question and the neighbouring farm, the Bałtyk II OWF (located approx. 1.6 km to the east) had to be delineated; this area was reduced by approx. 1.6 km^2, which constitutes 3.9% of the total original investment area, and it currently amounts to 39.65 km^2.

The coordinates of the FEW Baltic II investment after excluding the area for the purpose of the migration corridor are presented in the table below.

Tab 1. Coordinates of the FEW Baltic II investment, excluding the area designated for the migration corridor

Point	Easting CS92	Northing CS92	E WGS84	N WGS84
1	347305.055	807631.668	16°36′20.0000″E	55°06′30.0000″N
2	353711.067	809952.579	16°42′17.0000″E	55°07′52.0000″N
3	354097.379	809441.254	16°42′39.7473″E	55°07′35.8769″N
4	353736.309	806988.920	16°42′23.9191″E	55°06′16.1992″N
5	351908.596	805722.583	16°40′43.2191″E	55°05′33.3005″N
6	351109.543	803842.669	16°40′01.7107″E	55°04′31.6550″N
7	350536.919	803316.761	16°39′30.4350″E	55°04′14.0310″N
8	347419.308	802270.548	16°36′36.7906″E	55°03′36.7900″N
9	345832.211	802400.995	16°35′07.1368″E	55°03′39.2429″N
10	343816.309	802064.553	16°33′14.2471″E	55°03′26.0976″N

The coordinates of the migration corridor allowing birds to fly between the farm in question and the neighbouring Bałtyk II OWF are presented in the table below.

Tab. 2. The coordinates of the migration corridor allowing birds to fly between the farm in question and the neighbouring Bałtyk II OWF

Point	Easting CS92	Northing CS92	E WGS84	N WGS84
1	354538.63	812437.79	16°42′59.11″E	55°09′13.24″N
2	358495.97	811855.18	16°46′43.62″E	55°08′58.53″N
3	356672.80	799471.36	16°45′23.15″E	55°02′16.20″N
4	352708.01	800003.45	16°41′38.93″E	55°02′29.23″N

The FEW Baltic II offshore wind farm will consist of:

- up to 25 offshore wind turbines;
- inter-array power and telecommunications network, which will consist of subsea cables connecting the WTGs with one another and groups of WTGs with the offshore substation; with the maximum length of up to 60 km;
- offshore substation.

The FEW Baltic II offshore wind farm does not include the infrastructure for transmitting electricity generated by the farm to land. This facility will be subject to a separate administrative procedure.
The individual parameters of the project in the variant requested by the Investor are as follows.

Tab. 3 Investment parameters in the Investor's variant

Technical parameter	Limit values
Maximum number of WTGs [pcs]	25
Minimum clearance between the rotor blade tip and the water surface [m]	22
Maximum overall height of a WTG, including the rotor a.s.l. [m]	327
Maximum diameter of the rotor [m]	305
Maximum zone (area) of a single rotor [m²]	73,062
Maximum zone (area) of all rotors installed in the area of the offshore wind farm [m²]	1,826,550
WTG foundation type	monopile
OSS foundation type	monopile (max diameter 11.4 m)/ jacket with 3 piles of max diameter 4 m
The maximum diameter of a foundation pile [m]	11.4
Maximum area secured against scouring for one foundation [m²]	1257
Maximum total area secured against scouring for all foundations [m²]	32,682
Maximum inter-array cable infrastructure length [km]	60

WTGs will be distributed throughout the area designated for the wind farm. Appendix 2 to the decision presents the location and outline assumptions for the layout of the planned project, assuming the maximum number of WTGs permitted for implementation. The target number and locations of offshore WTGs will be specified at the construction design stage, taking into account the results of detailed geotechnical and wind surveys carried out by the Investor, and they will be known only after the design work is completed. At the current stage of works, only one offshore substation/booster station (OSS) is planned to be built within the development area resulting from the PSzW permit. Its location will result from the optimised layout of cable connections between WTGs. Inter-array power

and telecommunications network, which will consist of subsea cables connecting the WTGs and groups of WTGs with the offshore booster station, with a maximum length of up to 60 km; The number of cable lines and their length will depend on the number of offshore WTGs, their capacity, location, and interconnections between them.

The entire WTG structure will consist (from bottom to top) of a monopile foundation, a transition piece, a tower, a nacelle, and three rotor blades. When constructing WTGs, the TP-less method of assembling the tower (directly on the foundation, without a transition piece) is also assumed to be used. The final decision on the assembly technology used, with or without a transition piece, will be made at a later stage of the project development. The WTG foundation will be a monopile with a maximum diameter of 11.4 m. The maximum seabed area occupied by a single monopile will be no more than 123 m², while for a maximum of 25 WTGs, the area occupied by the turbine foundations will be no more than 5,412 m². Foundation installation involves driving the pile into the seabed using a hydraulic hammer or vibrohammer or drilling it into the seabed. Drive-Drill-Drive technology (DDD) is also possible, combining pile driving and drilling, depending on the seabed type. The foundation depth on the seabed will be approximately 25–43.5 m. If the pile driving stops before the intended target depth, it is planned to use technology to remove sediment from the pile interior to enable further driving and to spread the extracted material around the monopile. The expected amount of natural material within the monopiles to be distributed over the construction area is 35,520 m³, covering an estimated area of 18,000 m². Without taking into account interruptions due to unfavourable weather conditions and/or drilling, the installation of a single monopile will take approximately 24 hours. A transition piece will be installed at the top of the monopile, which will serve as a connection between the monopile and the WTG tower. Both the foundation, including the monopile and transition element, and the tower will be made of steel that meets applicable regulations and guidelines. Anti-washout protection may be required around each monopile. The final decision in this respect will be made at the stage of preparing the construction design, and it is assumed that the total area covered by the protection of the seabed around the structure against washing out or spreading of natural material obtained during the construction process, assuming the maximum number of WTGs in the requested variant, will amount to 50,700 m^2.

The 33 kV (or 66 kV)/220 kV" offshore substation, measuring approximately 100 m x 100 m x 100 m (length x width x height), will consist of a foundation and a top section. The station will be sited on foundations that, at the project design stage, will be selected to match the final dimensions of the facility and the geotechnical and hydrotechnical conditions of the seabed at the installation site. A monopile foundation with a maximum diameter of 11.4 m or a jacket foundation with three piles with a maximum diameter of 4 m is planned. The base will be made of steel. The upper part of the substation will consist primarily of a steel enclosure with several levels containing the necessary electrical and auxiliary components, such as the transformer, switchgear, shunt reactor, cooling systems, etc. The top section will also house cranes for moving materials to and from the transformer station during wind farm operation. The total weight of the substation is expected to be up to 4,000 tonnes.

The cables forming the internal power grid, connecting the WTG with the substation, will be designed for operation at an alternating voltage of 33 ÷ 66 kV or higher and will be constructed as three-core lines with a shielded copper or aluminium conductor with a conductor cross-section of up to 1200 mm² and an outer diameter of up to approx. 181 mm and a mass of 65 kg/m in air or smaller aluminium cables with a cross-section of up to 240 mm^2 and an outer diameter of approx. 146 mm and a mass of 30 kg/m in air, although these values may change at a further design stage. The internal network cables will be laid by burying them in the seabed to a depth of approximately 0.5–2.0 m, or, in the case of unfavourable geological conditions, laid on the seabed using permanent protection. However, during the further design phase, this assumption may change, and the depth cable laid on the

seabed may be greater than originally assumed. An optical fibre used for data transmission may be an integral part of a power cable or, in special cases, it will be laid separately.

The expected construction time of the investment will be up to 18 months and depends on the supply chain of individual elements of the wind farm and on the management of the supply process.

The implementation phase will include the following stages:

- transporting farm components from manufacturers to the construction and assembly port, and then to the construction site of the FEW Baltic II offshore wind farm;
- preparing the seabed for the installation of WTG foundations and an offshore substation;
- installation of foundations for the WTGs and an offshore substation, and other structural elements;
- laying the cables forming the inter-array power and telecommunications network.

In connection with the construction of the FEW Baltic II, logistics support is planned to be provided at coastal bases located in Baltic Sea ports, which are not covered by this procedure. Individual parts of the FEW Baltic II structure, supplied by manufacturers as finished components, will be temporarily stored in these ports and then transported to the investment site on board transport vessels. The construction/assembly port will ensure access from the sea for service vessels, transport vessels, medium and large vessels and jack-up barges. It is impossible to indicate the final port location at this stage of project implementation.

The operating status of the FEW Baltic II, including: power generated in offshore wind turbine generators, the condition of individual components, signalling the need for repairs or services, will be monitored using distributed data acquisition IT systems, e.g. a dedicated SCADA system. Such a system will collect current data, prepare its visualisation and control the entire production process. When necessary, the system may cause a WTG shutdown.

It is assumed that the operational lifetime of the wind farm will be approximately 35 years. According to the Investor's estimates, the annual electricity production will amount to approximately 1,760,000 MWh a year.

After the operation period is finished, it is expected that the Investment will be decommissioned. The decommissioning can be carried out under several scenarios:

- repowering, i.e. dismantling of the WTGs and replacing them with next-generation power plants, which will be more productive and enable producing more energy and using the area in question more efficiently; and adapting the internal power and telecommunications network and the offshore substation to the needs of new generation turbines;
- dismantling of the WTGs together with their foundations, decommissioning of the inter-array power and telecommunications networks and the offshore substation;
- dismantling the WTGs but leaving their foundations in the seabed, decommissioning of the inter-array power and telecommunications networks and the offshore substation.

However, the final method of decommissioning the Investment will depend on the existing legal conditions and available technical possibilities.

By authority of the Regional Director for Environmental Protection in Szczecin
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