



Netherlands Enterprise Agency

IJmuiden Ver Wind Farm Zone, Site Gamma-B

Commissioned by the ministry of Economic Affairs and Climate Policy

*>> Sustainable. Agricultural. Innovative.
International.*

Translation

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IJmuiden Ver Wind Farm Zone, Site Gamma-B

Draft Wind Farm Site Decision – Regulations

III Regulations

Regulation 1 Definition of terms

In this Decision, the following terms are defined as indicated below:

- *acoustic deterrent device*: a device with which harbour porpoises are driven away by means of a sound signal;
- *axis height*: the height of the rotor axle, to which the rotor blades of the wind turbine are attached, in relation to mean sea level (MSL);
- *cut-in wind speed*: the lowest wind speed at which the wind turbine delivers energy;
- *cybersecurity*: all security measures taken to prevent damage due to a disruption, failure or exploitation of an information system or computer;
- *dB re 1 μ Pa²s*: unit for SEL_{ss};
- *third party (called in by the permit holder)*: a legal entity other than the permit holder capable of operating the wind farm;
- *threshold value*: a value for bird density of 500 birds at rotor height per kilometre per hour, as determined by the Minister of Climate Policy and Green Growth in consultation with the State Secretary for Agriculture, Fisheries, Food Security and Nature;
- *sound level*: the aggregated source level over the frequency bands, expressed in decibels;
- *installed capacity*: **the maximum electrical output, also known as 'rated power', to which a wind turbine is designed to be able to be used for the production of renewable electricity under normal conditions, as can also be established by independent certifying parties;**
- *piling*: the placing of a foundation involving sound emissions that have a pulse-like or continuous/even character;
- *piling plan*: the plan mentioned in Regulation 4(2)(c);
- *piling report*: the report mentioned in Regulation 4(2)(g);
- *migration period (spring - birds)*: bird migration in the period between 15 February through to 31 May;
- *migration period (autumn - birds)*: bird migration in the period 15 August through to 30 November;
- *MIVSP*: Maritime Information Service Point.
- *MSL (Mean Sea Level)*: the average level of the sea (the surface of the sea), if all variations that result from the tides are averaged out;
- *night*: period between sunset and sunrise;
- *national security*: national security as referred to in Article 1 of the Investments, Mergers and Acquisitions Security Screening Act (Wet veiligheidstoets investeringen, fusies en overnames, Vifo).
- *normal conditions*: the average meteorological conditions occurring in a particular area during the period of one year;
- *operational control*: the actual determination and day-to-day regulation of the performance of the wind farm with respect to the ability to influence at least a cumulative nominal capacity of 100 MW of the wind farm.
- *rotor diameter*: the diameter the wind turbine blades cover (the imaginary circle that is drawn by the rotor blades of the wind turbine);
- *swept area*: the surface area of the imaginary circle that is drawn by the rotor blades of the wind turbine;
- *SEL_{ss}*: Sound Exposure Level (single strike);
- *start of construction*: the moment the first part of the wind farm is installed;
- *tip highest level*: the axis height plus half of the rotor diameter;
- *tip lowest level*: the axis height minus half of the rotor diameter;
- *UXO survey*: survey into the presence of unexploded ordnance in the seabed;
- *permit holder*: the holder of a permit under Section 12 of the Offshore Wind Energy Act.

Regulation 2 Boundaries of wind farm¹

1. The wind farm will be situated within the contours of the following coordinates:

Site Gamma-B		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
S_62	543841,8	5873281,7
S_63	536420,2	5879692,0
S_64	536374,3	5879747,8
S_65	536320,8	5879796,5
S_66	536280,8	5879824,9
S_67	536238,1	5879849,2
S_68	535407,9	5880566,3
WFZ_15	537146,3	5884508,1
WFZ_16	537853,5	5884419,1
WFZ_17	538565,5	5884384,5
WFZ_18	539278,0	5884405,3
WFZ_19	539986,7	5884481,6
WFZ_20	540687,6	5884611,2
WFZ_21	541443,6	5884816,1
WFZ_22	541485,2	5881716,6
WFZ_23	550145,0	5881716,6
S_69	553775,0	5881765,2
S_70	545963,9	5875094,1
S_71	545501,1	5875258,0
S_72	545450,7	5875057,0
S_73	545438,8	5874850,1
S_74	545461,5	5874665,0

The maps showing the location of Site Gamma-B are included in the appendix to this regulation Section IV of this Decision.

2. The route of the grid connection of Site Gamma-B with the TenneT platform Ijmuiden Ver (Gamma) is bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Site Gamma-B		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
TOS_03	546553,6	5874940,2
CE_28	546587,4	5874970,0
CE_29	546514,3	5874971,8
CE_30	546400,4	5875067,4
CE_31	546287,6	5875084,1
CE_32	545786,7	5874942,7
S_74	545461,5	5874665,0
S_73	545438,8	5874850,1
S_72	545450,7	5875057,0
S_71	545501,1	5875258,0
S_70	545963,9	5875094,1
CEZ_33	547747,9	5876617,6
CEZ_34	546927,9	5875270,7

3. No wind turbines will be installed in the maintenance zone of **the existing pipe line 'K17-FA-1 – K14-FB-1'**. These zones are bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Maintenance zone K17-A-FA-1 – K14-FB014		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
S_65	536320,8	5879796,5
S_66	536280,8	5879824,9
S_67	536238,1	5879849,2
MZ_151	535897,1	5880143,8
MZ_152	536388,8	5882790,5
WFZ_15	537146,3	5884508,1
MZ_153	537194,7	5884500,4

4. No wind turbines will be installed in the zone reserved for traffic to and from the **potential future mining platform 'L' and for a potential new pipe line**. These zones are bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Reservation possible mining activities platform L		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
LOFZ_11	540425,6	5876232,4
LOFZ_12	539007,4	5877457,3
LOFZ_13	544013,4	5881716,6
LOFZ_14	546871,3	5881716,6
LOFZ_15	543672,5	5878995,0

LOFZ_16	543828,5	5878753,8
LOFZ_06	543286,4	5878496,6
LOFZ_05	542939,6	5878771,0
LOFZ_04	542510,7	5878663,0
LOFZ_03	542335,4	5878256,9
LOFZ_02	542550,8	5877870,6
LOFZ_09	542210,0	5877376,8
LOFZ_10	541997,0	5877569,3

5. No wind turbines will be installed in the zone reserved for traffic to and from the **potential future mining platform 'K'** and for a **potential new pipe line**. These zones are bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Reservation possible mining activities platform K		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
KOFZ_01	537503,6	5878756,2
KOFZ_08	537049,6	5879148,4
KOFZ_09	537264,4	5879339,7
KOFZ_02	537601,4	5878843,3
KOFZ_07	538260,4	5878102,5
KOFZ_06	538332,5	5878212,0
KOFZ_10	538872,6	5877950,7
KOFZ_11	538714,5	5877710,3

6. No wind turbines will be installed and no inter-array can be laid in the safety zone of the **potential future mining platform 'K'**. These zones are bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Safety zone possible platform K		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
KOFZ_01	537503,6	5878756,2
KOFZ_02	537601,4	5878843,3
KOFZ_03	537911,3	5878928,9
KOFZ_04	538209,2	5878808,1
KOFZ_05	538372,0	5878531,0
KOFZ_06	538332,5	5878212,0
KOFZ_07	538260,4	5878102,5

7. No wind turbines will be installed and no inter-array can be laid in the safety zone of the **potential future mining platform 'L'**. These zones are bounded by the points in the table below, which are also indicated on the map included in Section IV of this Decision in the appendix to these regulations.

Safety zone possible platform L		
Coordinates according EPSG 25831		
Point No.	Easting	Northing
LOFZ_01	542860,0	5877782,8
LOFZ_02	542550,8	5877870,6
LOFZ_03	542335,4	5878256,9
LOFZ_04	542510,7	5878663,0
LOFZ_05	542939,6	5878771,0
LOFZ_06	543286,4	5878496,6
LOFZ_07	543323,6	5878177,3
LOFZ_08	543158,7	5877901,3

8. The rotor blades of the wind turbines must remain within the contours cited in paragraph one and completely outside the maintenance zone of the existing pipe line referred to in the third paragraph, the reserved zones referred to in the fourth and fifth paragraph and the safety zones referred to in the sixth and seventh paragraph.
9. In the interest of an efficient connection, the permit holder may, in the event of unforeseen circumstances, in agreement with TenneT, deviate from the provisions of the second paragraph. The permit holder shall report this as soon as possible to the Minister of Climate and Green Growth.
10. The Minister of Climate and Green Growth can agree with a request of the permit holder to deviate from one or more of the limits referred to in the fourth to seventh paragraph, as well as the related limits referred to in the eight paragraph, if it is established that these areas are not used for mining activities by Tenaz Energy Netherlands.

Regulation 3 Bandwidth of the wind farm

1. The wind farm consists of wind turbines, foundations, scour protection and cabling up to the connection point.
2. The maximum number of wind turbines to be installed is 76.
3. Three-bladed wind turbines with a rated capacity of at least 15 MW per wind turbine are to be installed in the wind farm.
4. The minimum distance permitted between the wind turbines is four times the rotor diameter.
5. The minimum tip lowest level permitted is 25 metres above MSL.
6. The maximum tip highest level permitted is 304.8 metres above MSL.
7. The maximum total swept area permitted is 3,509,788 m².
8. Turbines will be connected to the TenneT platform IJmuiden Ver (Gamma). Without prejudice to other regulations, the minimal capacity that can be connected is 1 GW and **the maximum capacity that can be connected from a technical point of view is 1.15 GW.**
9. **Wind turbines are placed on a monopile foundation.**
10. Coatings of underwater structures contain as few environmentally harmful substances as reasonably possible.
11. The permit holder must take measures to prevent the dispersal of plastic particles from rotor blades insofar as is reasonably possible.
12. Sacrificial anodes will be used as little as reasonably possible as cathodic protection of steel constructions. If use of sacrificial anodes cannot be completely avoided, they must consist of alloys of aluminium or magnesium. The alloys may contain minimal amounts (<4% by weight) of other metals.
13. The permit holder must report to the Minister of Climate Policy and Green Growth on the composition and quantity of the coatings referred to in paragraph 10 and – insofar as applicable – the sacrificial anodes referred to in paragraph 12, as well as the measures referred to in the paragraph 11. This must be done at least four weeks prior to the start of construction of the wind farm.
14. No more than 3,440,200 m² of the seabed will be disturbed during the construction of the wind farm.

15. No later than four weeks prior to the start of construction of the wind farm, the permit holder will submit a plan to the Minister of Climate Policy and Green Growth setting out how the provisions of paragraph 14 will be met and they will implement the work in accordance with the plan.

Regulation 4 Mitigating measures

1. Measures to reduce disturbance and prevent physical effects on harbour porpoises and seals.
 - a) Piling operations will start with low piling energy and extended intervals between strokes. The duration and power of the low piling energy must be such that harbour porpoises and seals have the opportunity to swim to a safe location. The piling plan should provide details outlining the duration and power of the low piling energy.
 - b) Where an installation technique other than pile driving is used in the construction of the wind farm, the permit holder will use of one or more acoustic deterrent devices set to frequencies relevant for harbour porpoises for half an hour before the start of the work, as well as during the first five minutes of the work. This procedure must be repeated if the work is interrupted for an hour or more. In its piling plan, the permit holder will explain the type(s) of deterrent device(s) it plans to use, and include supporting evidence of proven effectiveness.
 - c) The permit holder may deviate from the provisions in subparagraph b of this paragraph in the event that the devices referred to in that subparagraph produce more noise at the relevant frequencies than the installation technique to be used, or an expert in the field justifies in the piling plan that the measure as such does not contribute to the prevention of permanent effects on the hearing of harbour porpoises.
 - d) The permit holder must make every effort to minimise the disturbance to harbour porpoises and seals during the construction and removal of the wind farm as much as is reasonably possible.
2. Measures to reduce disturbance and prevent physical effects on harbour porpoises and seals during construction of the wind farm.
 - a) The underwater sound level resulting from impulse noise during the construction of the wind farm must not exceed 164 dB re 1 $\mu\text{Pa}^2\text{s}$ SEL_{ss} (at 750 metres from the noise source), subject to the provisions in subparagraph e of this paragraph.
 - b) The number of harbour porpoise disturbance days due to construction work must not exceed 62,092.
 - c) The permit holder is required to prepare a piling plan to be submitted to the Minister of Climate Policy and Green Growth, no later than four weeks before the start of construction. The piling plan must include at least:
 - a description of the installation process;
 - a communication plan;
 - a noise forecast;
 - a description of the mitigation measures to be taken;
 - a description of the design and technical specifications of noise measurements.
 - d) If a technique that does not cause impulse noise is (partly) used for the installation of turbine foundations, the piling plan will include a calculation of the number of harbour porpoises disturbance days expected, prepared by an expert in the field, demonstrating compliance with subparagraph b of this paragraph.
 - e) The piling plan allows the permit holder to deviate from the sound emission standard referred to in subparagraph a of this paragraph, for activities conducted for testing and research purposes that are in compliance with applicable legislation and regulations and for which compelling reasons of overriding public interest exist. This deviation must be limited to levels strictly necessary for the purposes of the test and applies to three foundations at most for a maximum of 25 minutes per foundation. The permit holder must explain the reason for the deviation in the piling plan. This substantiation must contain the following as a minimum:
 - the benefits and necessity of the deviation;
 - a description of the technique and resources required;
 - the anticipated noise level, the duration that the sound emission standard is expected to be exceeded in the different phases of the pile-driving process;

- a description of the measures taken to limit noise levels as much as possible;
 - a calculation of the total number of harbour porpoise disturbance days expected, prepared by an expert in the field, demonstrating compliance with subparagraph b of this paragraph;
 - the method for monitoring and processing research results;
 - the period within which the results will be submitted to the Minister of Climate Policy and Green Growth.
- f) The permit holder will perform the construction work in accordance with the piling plan.
- g) During the piling work, the sound level must be continuously measured by the permit holder. These measurements must take place at two, directly opposite, positions that are 750 metres from the foundation. The sound measurements for each foundation must be submitted to the Minister of Climate Policy and Green Growth in a piling report within 48 hours after the foundation has been installed. In addition, after completion of all piling work, the permit holder must submit the measurement data to the Minister of Infrastructure and Water Management for international reporting obligations. Each foundation report must contain at least:
- foundation ID, location, length and diameter of the foundation;
 - the maximum quantity of energy;
 - a description of the mitigation measures used to minimise noise levels;
 - start and end time of the installation of the foundation;
 - start and end time of the use of an acoustic deterrent (where applicable);
 - start and end time of the measures used to minimise noise levels;
 - the results of the sound measurements.
- h) If, in the case of pile driving, successive sound measurements show the underwater noise level during the piling work does not exceed the sound emission standard stated in subparagraph a of this paragraph, the permit holder can ask the Minister of Climate Policy and Green Growth to allow the frequency of sound measurements to be reduced.
3. Measures to limit bird collision victims at rotor height during mass migration periods.
- a) During migration periods, the permit holder will reduce the number of rotations per minute per wind turbine to fewer than two at night when the threshold value is exceeded, as indicated by the Minister of Climate Policy and Green Growth.
- b) The permit holder is obliged to cooperate, without financial compensation, in the placement and installation of equipment on, in or to turbines to be designated by the Minister of Climate Policy and Green Growth for the implementation of the measure referred to in subparagraph a of this paragraph. This includes the provision of mounting structures to the designated turbines. An agreement will be concluded with the permit holder for the placement and installation of the equipment, taking cost efficiency into account.
- c) The permit holder is obliged, without financial compensation, to provide access for the management and maintenance of the equipment referred to in subparagraph b of this paragraph. An agreement will be concluded with the permit holder for the management and maintenance of the equipment, taking cost efficiency into account.
- d) Each year, no later than 1 February and 1 August, the permit holder will report to the Minister of Climate Policy and Green Growth explaining how subparagraph a of this paragraph has been implemented in the preceding six months.
4. Measures to limit collision victims among bats at rotor height during autumn migration periods.
- a) At night, during the periods indicated in the table below, the cut-in wind speed at axis height of the wind turbines will be adjusted as shown.

Day number	Cut-in speed [m/s]	Day number	Cut-in speed [m/s]
226-228	4.7	265-267	5.5
229-231	4.8	268-270	5.5
232-234	5.0	271-273	5.4
235-237	5.2	274-276	5.3
238-240	5.3	277-279	5.1
241-243	5.4	280-282	5.0
244-246	5.5	283-285	4.9
247-249	5.5	286-288	4.7
250-252	5.6	289-291	4.4
253-255	5.6	292-294	4.2
256-258	5.6	295-297	4.0
259-261	5.6	298-300	3.8
262-264	5.6	301-303	3.6

- b) At a wind speed lower than the adjusted cut-in wind speed referred to in subparagraph a of this paragraph, the permit holder will reduce the number of rotations per minute per wind turbine to less than one during the nights referred to in subparagraph a of this paragraph.
 - c) Measurements of wind speed and calculations of sunset and sunrise will be conducted per wind turbine, with time intervals (for measurements) of not more than twenty minutes, with the most recent time interval measurement determining the application of the measures referred to in subparagraphs a and b of this paragraph.
 - d) After the last period referred to in subparagraph a of this paragraph, and no later than 1 December, the permit holder will report to the Minister of Climate Policy and Green Growth on how subparagraphs a, b and c of this paragraph have been implemented.
5. Measures to prevent nitrogen deposition in Natura 2000 areas.
- a) During construction, operations and removal work, nitrogen depositions in nitrogen-sensitive Natura 2000 areas must be prevented.
 - b) In an action plan, the permit holder will indicate which work and vessels will be deployed for construction and operations activities of the wind farm. By means of an attached calculation, based on a calculation model for the construction phase prescribed in or pursuant to the Environment and Planning Act, and an attached calculation based on the aforementioned calculation model for the operations phase, the permit holder will demonstrate that nitrogen deposition in the nitrogen-sensitive Natura 2000 areas resulting from the deployment of work and vessels in line with the action plan for these separate phases, does not exceed 0.00 mol N/ha/year.
 - c) In an action plan, the permit holder will indicate which work and vessels will be deployed for removal (decommissioning) of the wind farm. By means of an attached calculation using the calculation model for the removal phase prescribed by or pursuant to the Environment and Planning Act, the permit holder will demonstrate that nitrogen deposition in the nitrogen-sensitive Natura 2000 areas resulting from the deployment of work and vessels in line with the action plan for this phase does not exceed 0.00 mol N/ha/year .
 - d) The permit holder will submit the action plan referred to in subparagraph b of this paragraph to the Minister of Climate Policy and Green Growth no later than four weeks before the start of construction of the wind farm.
 - e) The permit holder will submit the action plan referred to in subparagraph c of this paragraph to the Minister of Climate Policy and Green Growth no later than four weeks before the start of removal of the wind farm.
 - f) The permit holder will perform the work in accordance with the plans drawn up in subparagraphs b and c of this paragraph.
6. Measures to limit disturbance to seals and birds by shipping traffic.
- a) When transporting by ship to and from the site, the permit holder must take into account the presence of seals on sandbanks and in designated resting areas, as well as the presence of bird concentrations. In doing so, the measures prescribed in the Voordelta Management Plan, the Deltawateren Management Plan, the Waddenzee

Management Plan and the Noordzeekustzone Management Plan will be observed. The measures are included in the appendix to this regulation in Section IV of this Decision.

- b) Subparagraph a of this paragraph will cease to apply to one or more of the areas referred to in that subparagraph if and when, for the area in question, an irrevocable management plan includes transport by ship to and from the site referred to in subparagraph a of this paragraph as an action in accordance with the management plan.
7. Measures to increase the suitable habitat for species native to the North Sea.
- a) If stones, rocks or other materials are used to prevent scour around the foundations of the wind turbines, then for at least 40% of the wind turbines the scour protection must be designed in such a way that no movement of the materials will occur in storm conditions with a return period of one year.
 - b) The turbines referred to in subparagraph a of this paragraph are the most westwardly positioned turbines.
 - c) The scour protection referred to in subparagraph a of this paragraph must contain at least two crevices or cavities per square metre of surface area that are at least 10 cm and at most 30 cm in diameter and at least 20 cm and at most 50 cm deep. The design of the scour protection must minimise sedimentation in the cavities.
 - d) Without prejudice to the provisions in subparagraph a of this paragraph, the obligation referred to in subparagraphs c of this paragraph can alternatively be fulfilled by installing six artificial structures per wind turbine onto or into the scour protection referred to in subparagraph a of this paragraph. These structures must be placed on top of the scour protection in a stable manner or be partly or fully embedded in the scour protection and be situated outside the area of turbulence created by the wind turbine pile in the dominant direction of the current. The design of the scour protection must minimise sedimentation in the cavities.
 - e) For the artificial structures referred to in subparagraphs d of this paragraph, the following structures or combinations of structures are permitted:
 - Pipes, either completely cylindrical or with a hexagonal exterior and a cylindrical interior, with both a length and diameter of at least 100 cm. One of the pipe ends must always be accessible and a pipe must be provided with a minimum of four holes at the top, measuring a minimum of 15 cm and at most 30 cm per metre, to guarantee water exchange.
 - spherical or cubic structures with an internal diameter of at least 100 cm and accessible through at least six at most 15 openings with a diameter varying between 15 and 50 cm;
 - other structures that contain at least 6 separate cavities with the following dimensions: diameter of at least 10 cm and at most 30 cm and a depth of at least 20 cm and at most 50 cm.
 - f) Without prejudice to the provisions of subparagraphs a and d of this paragraph, other artificial structures or combinations of structures not included in subparagraph e of this paragraph can also be installed. The dimensions of cavities and openings and the number of openings in these structures must be such that the structures offer habitats for the target species in a manner similar to the structures specified in subparagraph e. Furthermore, the permit holder must also organise a site-specific monitoring programme to examine the effects of the measures.
 - g) The permit holder is required to prepare an action plan for the measures to be taken referred to in subparagraphs a through f and will submit this plan to the Minister of Climate Policy and Green Growth no later than four weeks before the start of construction. This plan must at least include a map and the coordinates of the turbines referred to in subparagraphs a and b.
 - h) The work must be performed in accordance with the plan referred to in subparagraph g of this paragraph.
8. Measures to protect archaeology and cultural history.
- a) The permit holder will not conduct any seabed-disturbing activities within a radius of 100 metres of potentially archaeologically valuable objects and the buried ferrous objects, the coordinates of which are listed in the appendix to this paragraph in Section IV of this Decision. Oversail of rotor blades is permitted.

- b) Deviation from subparagraph a of this paragraph may be permitted if it is not reasonably possible to avoid the performance of seabed-disturbing activities within a radius of 100 metres from the potentially archaeologically valuable objects referred to in subparagraph a of this paragraph, and a detailed exploratory underwater field survey (Inventariserend Veldonderzoek, IVO) into the possible presence of archaeological monuments has been conducted beforehand for these sites. This survey must be performed in accordance with the prevailing Dutch Archaeology Quality Standard Aquatic Soils.
 - c) Deviation from subparagraph a of this paragraph may be permitted if it is not reasonably possible to avoid the performance of seabed-disturbing activities within a radius of 100 metres from the buried ferrous objects referred to in subparagraph a of this paragraph, and the UXO survey is archaeologically supervised on site. This survey must be performed in accordance with the prevailing Dutch Archaeology Quality Standard Aquatic Soils.
 - d) The results of the surveys referred to in subparagraphs b and c of this paragraph must be submitted to the Minister of Climate Policy and Green Growth no later than six months before the start of the construction of the wind farm.
 - e) Depending on the conclusions of the surveys referred to in subparagraphs b and c of this paragraph:
 - the work can proceed without any changes;
 - a follow-up study will be required;
 - physical measures must be taken to protect archaeological sites;
 - sites are to be excluded permanently from interference, taking into account a buffer zone; or
 - the work must be supervised archaeologically.
 - f) The permit holder will formulate a plan that specifies how the requirements stemming from this paragraph and from Sections 5.10 of the Heritage Act (Erfgoedwet) and 7.37 of the Environmental Activities Decree (*Besluit activiteiten leefomgeving, Bal*) will be implemented, and will submit this plan to the Minister of Climate Policy and Green Growth no later than three months prior to the start of construction.
 - g) The work must be performed in accordance with the plan referred to in subparagraph f of this paragraph.
9. Measures to reduce light pollution and to promote the safety of seafarers and aviation.
- a) If visibility outside the daylight period exceeds 5 kilometres, the nominal light intensity of aeronautical obstacle lights outside the daylight period shall be reduced to 30 percent. If visibility outside the daylight period exceeds 10 kilometres, the nominal light intensity of aeronautical obstacle lights outside the daylight period shall be reduced to 10 percent.
 - b) All wind turbines will be equipped with nautical identification markings on panels indirectly illuminated by a low-intensity light source. The identification markings must be positioned on the turbine at intervals of 120 degrees. The identification codes must be clearly legible from a position 3 metres above MSL and at least 150 metres from the wind turbine.
 - c) Without prejudice to the provisions in subparagraphs a and b of this paragraph, and contrary to Section 7.40(2) of the Environmental Activities Decree, the permit holder will formulate the notification referred to Section 7.34(2)(d) of the Environmental Activities Decree **in accordance with the information sheet 'Designation offshore wind turbines and offshore wind farms in relation to aviation safety' and the IALA guideline G1162.**
 - d) In the notification referred to in Section 7.34(2)(d) of the Environmental Activities Decree, the permit holder can, for the sake of the protection of birds or for the sake of research on the protection of birds, deviate from part a of this paragraph.
 - e) In the notification referred to in Section 7.34(2)(d) of the Environmental Activities Decree, the permit holder will also take into account the requirements stemming from safety investigations in the context of helicopter flights to and from the TenneT substation converter platform.
 - f) On the instructions of the Minister of Climate Policy and Green Growth or the Coastguard, the turbines will be illuminated in the event of a rescue operation in or in the immediate vicinity of the wind farm.
 - g) The work must be performed in accordance with the notification referred to in subparagraph c of this paragraph.

- h) For the sake of air traffic safety, the permit holder shall submit the following information (per turbine position) to the Minister of Infrastructure and Water Management no later than four months prior to the installation of the first foundation:
- turbine ID;
 - coordinates (both in WGS84 and ETRS89 zone 31);
 - rotor diameter (in metres);
 - hub height (in metres, MSL);
 - tip height (in metres and feet, MSL);
 - horizontal and vertical measurement accuracies (according to EU 469/2019 AIS.TR.360);
 - number of obstacle lights per wind turbine;
 - type and colour of the obstacle lights;
 - light intensity of obstacle lights (in candela);
 - markings;
 - height and colour of lighting halfway up the tower (in meters, MSL);
 - intended date of installation of the first foundation of the wind farm and the intended date of installation of the last wind turbine of the wind farm.
- i) For the sake of air traffic safety, the permit holder shall report deviations from what has been submitted pursuant to section g of this paragraph to the Minister of Infrastructure and Water Management as soon as possible after installation of a wind turbine.

10. Measure to promote safety when working on cables, pipelines and boreholes.

- a) During work on **the planned cables from TenneT, the existing pipe line 'K17-FA-1 – K14-FB-1'** and boreholes, on the instructions of the Minister of Climate Policy and Green Growth, the number of rotations per minute per wind turbine for the wind turbines within a radius of 1,000 metres from the work site must be reduced to less than two.

11. Measures to protect boreholes.

- a) The permit holder will not conduct any seabed-disturbing activities within a radius of 150 metres of the borehole sites listed in the appendix to this paragraph in Section IV of this Decision. Oversail of rotor blades is permitted.
- a) Deviation from subparagraph a of this paragraph may be permitted if it is not reasonably possible to avoid the performance of seabed-disturbing activities within a radius of 150 metres from a borehole, and it has been demonstrated beforehand by further investigation and with the consent of the borehole operator that no safety risks can occur.
- b) The results of the surveys referred to in subparagraph b of this paragraph must be submitted to the Minister of Climate Policy and Green Growth no later than three months prior to the start of the construction of the wind farm.

Regulation 5 Data gathering, monitoring and evaluation

1. The obligation to cooperate with regard to research and the installation, management and maintenance of equipment and sensors in the wind farm on behalf of the Government.
- a) Without prejudice to the provisions in Regulation 4(3)(b), the permit holder is required, without financial consideration, to cooperate with the design, installation, management and maintenance of sensors and equipment in the wind farm by or on behalf of the Government, in the context of performing public duties in the following aspects:
- digital connectivity,
 - ecology,
 - hydrological/meteorological information,
 - maritime security,
 - shipping and aviation safety.
- b) The obligations referred to subparagraph a of this paragraph may include:

- provision of an MIVSP installation point in the wind turbine (inside) for equipment, including network equipment for fibre optic communication to the TenneT platform,
 - provision of a safely accessible attachment point for sensors and equipment to the wind turbine (outside),
 - provision of an attachment point for sensors and equipment to the wind turbine foundation and erosion protection,
 - laying of cables between the equipment in the wind turbine and sensors and equipment on the wind turbine,
 - supply of power for the sensors and the equipment in and on the wind turbine,
 - provision of optic fibre infrastructure from wind turbines to the TenneT platform,
 - patching of the optic fibre infrastructure to the MIVSP facility.
- c) Without prejudice to the provisions in Regulation 4(3)(c), the permit holder is required, without financial consideration, whether or not with vessels supplied by the permit holder, to cooperate with granting timely access to all parts of the wind farm to persons performing tasks and activities on behalf of Government in the context of the aspects referred to in subparagraph a of this paragraph and related research activities.
2. After installing the inter-array cables, the permit holder will, at the request of the Minister of Climate Policy and Green Growth, share inter-array cable data that could provide insight into the field intensities of cables. This data includes:
- cable type;
 - material used;
 - burial depth;
 - design of the cable;
 - array cable layout (as built);
 - lay length of the cable;
 - (a bandwidth) of the actual amount of current transported through the cable.

Regulation 6 Permit

The permit referred to in Section 12 of the Offshore Wind Energy Act will be issued for a period of 40 years.

Regulation 7 Security strategy

1. The entity that operationally manages the wind farm, namely the permit holder or a third party commissioned by the permit holder, is established in the EU.
2. The permit holder must submit a strategy with cybersecurity, national security and physical resilience components to the Minister of Climate Policy and Green Growth no later than six months prior to start of construction of the wind farm. The strategy will cover both the construction and operational phases and will specify which risks are managed and which are placed beyond the scope.
3. The strategy referred to in the second paragraph contains the following:
 - a) The most important security risks based on a review of:
 - the continuity and integrity of the management of the wind farm (hereinafter: interests);
 - the threats against which the interests must be protected, including threats originating from state actors;
 - the extent to which the interests to be protected are resistant to the **threats, also known as 'resilience'**.
 - b) The measures to be taken to achieve and maintain the resilience at an appropriate level during the entire operating period.
 - c) A description of the high-level architecture of the entire IT/OT environment.
 - d) A description of the physical security and how applicable laws and regulations and sectoral guidelines in this field are met, at least, in any case, the Critical Entities Resilience (CER) Directive.
 - e) A description of at least the following subjects based on the ISO/IEC27001 or IEC62443 standard(s):

- Design of the Information Security function within the organisation, including the way in which this is checked.
 - Requirements for personnel such as screening, knowledge and skills.
 - A description of the management processes in relation to cybersecurity with:
 - asset management,
 - risk management,
 - vulnerability management,
 - incident detection, response and recovery,
 - business continuity management,
 - identity and access management in the physical and cyber domain,
 - backup and restore,
 - exercise structure with realistic scenarios.
 - Risks in the supply chain (supply chain risk management);
 - The way in which applicable legislation and regulations and sectoral guidelines in the field of cybersecurity are met, in any case the Network and Information Security (NIS2) Directive, the network code on cybersecurity for cross-border electricity flows and the Cyber Resilience Act;
 - A description of experience and the approach to receiving and sharing security information and knowledge.
4. Every five years, the permit holder must submit an up-to-date version of the strategy as referred to in the second paragraph to the Minister of Climate Policy and Green Growth.

Regulation 8 Removal

The permit holder will remove the wind farm no later than two years after operations have ceased and within the term of the permit.

Regulation 9 Financial security

1. At the latest, when the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland, RVO) receives proof that Guarantees of Origin have been issued for the supplied electricity, the permit holder will provide the State with a bank guarantee in the **amount of €120,000 per MW installed in respect of the costs of removal of the wind farm.**
2. The permit holder will annually increase the amount referred to in the first paragraph by 2% as a result of indexation for a period of 12 years after the bank guarantee for the removal of the wind farm is issued.
3. After operating for a period of 12 years after 24 years of operation and one year before the date of removal, the Minister of Climate Policy and Green Growth will redetermine both the amount referred to in the first paragraph and its indexation.

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