

Incoming questions on wind tender Hollandse Kust (west)

This document contains answers to the questions TenneT has received related to the wind tender Hollandse Kust (west).

Total of questions and answers:

Last update: 14st April 2022

QUESTION 1

Please clarify the maximum allowed exported power at any given moment in time.

Please refer to article 3.6 of the Connection and Transmission Agreement. The Platform is connected to the onshore grid with two grid connection systems with a continuous capacity of 350 MW each. Hence, annex 2 to the Realisation Agreement and Connection and Transmission Agreement stipulates the Feed-in Transmission Capacity as two times 350 MW. In addition, the export cable (through dynamic rating) and the main transformers (onshore and offshore) allow for a dynamic transmission capacity up to 380 MW per grid connection system. Therefore, two times 380 MW is the limit that needs to be respected despite the amount of installed power.

QUESTION 2

Please clarify the maximum overplanting capacity to be installed by the Connected Party and if load can be connected as well.

TenneT does see some possibilities for allowing extra overplanting and/or connecting loads to the offshore 66 kV grid. TenneT will include additional wording on these topics in the annexes to the Realisation Agreement and Connection and Transmission Agreement along the following lines:

Given TenneT's experiences with other offshore windfarms, it is TenneT's obligation to warn the OWF that especially extra overplanting might very well lead violation of grid requirements like for instance short circuit levels, harmonic emission limits and insulation coordination, since those other windfarms are already very close to the limits with overplanting up to 380 MW per export system (export cable and transformer).

In addition to the compliancy requirements for insulation coordination, the OWF shall also calculate and evaluate the overvoltages in the TenneT system up to the 66 kV transformer windings and the OWF shall also consider and respect the (transient) limits of TenneT's equipment.

All-inclusive technical requirements for extra overplanting and/or loads cannot be given. The following indicative statements may provide guidance:

- $\cos(\phi)$ of loads shall be equal to 1 at all times;
- installed power shall not be more than 250 MW per transformer winding (66 kV busbar);
- installed power shall not be more than 500 MW per transformer in total;
- loads shall not be more than 100 MW per transformer winding (66 kV busbar);
- load difference between the two transformer windings (66 kV busbars) shall not be more than 50 MW;
- and last but not least: all other RfG, netcode and CTA requirements shall be respected at all times (e.g. short circuit level, harmonics, insulation coordination, etc.)

Fulfilling these statements still does not give any guaranty that a specific amount of extra overplanting and/or load is feasible for a specific grid connection system. The onshore connection point (onshore substation and grid) must be also taken into account.

TenneT shall only assess the final feasibility of the cases of the winners of the HKW wind site tenders.

QUESTION 3

Which ancillary services could be provided by the Connected Party to TenneT?

Please refer to <https://www.tennet.eu/electricity-market/dutch-ancillary-services/> for more information on ancillary services that TenneT procures and the requirements for these.

QUESTION 4

Which ecological measures does TenneT take on the offshore grid?

TenneT applies a set of Nature Inclusive Design measures, described in the [offshore grid investment plan](#).

QUESTION 5

What are the possibilities to use the TenneT platform for ecological innovations?

The offshore wind farm developer may propose to install information systems in line with paragraph 9 and 10 of annex 3 to the Realisation Agreement and Connection and Transmission Agreement. TenneT will analyse for each proposed innovation to what extent it can be allowed on the platform. This analysis will take into account applicable laws and regulations, technical impact and safety. Alignment with Rijkswaterstaat may also be required depending on whether the Connected Party proposes to use shared information systems.

QUESTION 6

The Wind Farm Site Decisions specifies that the windfarms are requested to shut down in case of bird migrations. A 48-hours' notice period will be applicable. What possibilities exist for other curtailments?

A slidedeck that explains the relevant processes that TenneT applies to guarantee safe transport of electricity is available on request at netopzee@tennet.eu

QUESTION 7

Could you elaborate on any costs associated with connection to the offshore grid, also in relation to works during installation, use of fibre optics and electricity consumption?

There are no grid connection costs (Dutch: aansluitdienst/transportdienst) charged to producers connected to the offshore grid (except for the electricity consumption on the platform). Annex 2 of the Realisation Agreement and Connection and Transmission Agreement contains the relevant provisions on fibre optics and annex 7 on applicable costs for offshore services. Electricity consumption would have to be agreed and settled with your electricity supplier.

QUESTION 8

Could you elaborate on any cost that would be required for the bell mouth after bid award?

For HKW Alpha (Site VI) all IAC J-tubes will be installed offshore with a cover plate only. The Connected Party shall procure and install their own bell mouths. The costs for the bell mouths will depend on the CPS supplier and will be outweighed by the costs for the CPS itself, which is in scope of the Connected Party. The total costs for the bell mouths will however be determined by the offshore installation, which is for HKW

Alpha in scope of the Connected Party.

QUESTION 9

<i>Is the fibre optic network of HKW Alpha ready for usage from the delivery of the grid connection systems onwards?</i>

The fibre optic network will be ready from delivery of the grid connection system onwards. Please refer to the annexes of the REA and CTA for the rules on usage of the fibre optics. Use by Connected Party for its own purposes is allowed, subletting to third parties or commercial use is not.

QUESTION 10

<i>Can we install cameras on the TenneT platform?</i>
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The Connected Party can install CCTV's on the roof deck directed to the wind farm site. Connected Party can also install CCTV's in the Connected Party's rooms.