

PRESENT	Joost Vermeulen - Ministry of Economic Affairs, Martin Ars-Nuon, Johan Dekkers-Eneco, Jasper Vis- DONG Energy, Jan Maas- DELTA Energy, Joost Pellens-RWE, Ole Holmstrom- DONG Energy, Jos Jacobs- Eneco, Bob Meijer- GDF Suez, Michiel Müller-Ecofys, Dirk Kramer- DC Offshore, André Hamers-Meerwind, Jeroen Popma-Ensol, , Diedert Brentjens- Parkwind, Alan Croes-TenneT, Ralph Harrewijn- TenneT, Frank Wester-TenneT, Rob van der Hage-TenneT, Bart van Hulst- TenneT, Fokke Elskamp-TenneT, Dirk van der Cammen-Parkwind	DATE	December 11, 2014
		DATE OF MEETING	November 27, 2014
		TIME OF MEETING	13.00 - 16.00 hrs
		LOCATION OF MEETING	Papendal, Arnhem
		REFERENCE	ONL 14-019
		ENCLOSURES	1
		PAGE	1 of 3

BY Rob van der Hage

SUBJECT Expert Meeting WoZ

1. Context

With the presentation the framework in which the TenneT concept has been designed was explained. This meeting isn't part of a consultation process regarding those topics, but seeks consultation and alignment on the technical design given all these requirements.

2. HV/MV connection interface OWF – TenneT

2.1. Voltage level

TenneT proposes a MV connection interface on 66kV. This has been challenged by the participants given the current planning and on the other hand has been recognized as a future step that would be beneficial to lower the costs for Offshore Wind. Enough competition from suppliers should be verified, including certainty on certifications for the necessary equipment. An interaction with the conditions for the tender by MinEZ for the "Kavels" is foreseen when this step is taken.

Action TenneT: prepare position paper on 66kV. This paper should address the dilemma's regarding the 33kV – 66kV options with the concerns from the stakeholders OWF, MinEZ and TenneT.

2.2. Physical interface point

TenneT proposed to interface at the cable sealing end. While there are some next steps to be taken to fill in the details this approach was not challenged.

2.3. Number of J-tubes

TenneT requested if a number of J-tubes could be provided for a 33kV and a 66kV connection philosophy.

Action NWEA: to deliver number of J-tubes After an internal meeting at NWEA, TenneT was informed that NWEA didn't want to take this responsibility given TenneT is the grid operator.

2.4. Protection

The proposed approach was not challenged.

2.5. kWh meter

The proposed approach was not challenged.

2.6. Operation of bays

After elaborating on the reasons for the proposed approach, this was not challenged.

2.7. Data links

TenneT proposes to connect the fibers from the OWF to shore and provide this service. Given current practice differs between parties, a better understanding is needed if there might be reasons to deviate from this approach. This is mainly related to the SCADA concept. The requested bandwidth was not expected to raise any issues.

2.8. SCADA

TenneT's concept is based on a "no need for access" on the platform offshore and therefore SCADA can be connected onshore by the provided data links. This was challenged by the concept where some suppliers install SCADA systems on the platform for operation of the OWF. The dependency of the export cable with telecom is also mitigated in this respect.

Action TenneT: Verify with suppliers if this is mandatory [TenneT] Understanding of this requirement is needed before final decision on this matter.

2.9. Capacity, guaranteed or overplanting

TenneT addressed this as an need to know requirement for the design process. Parties recognized this and would address this in a separate consultation with the Ministry of Economic Affairs.

Action NWEA: Inform TenneT of design criteria for the export capacity.

3. Requirements from RfG code (SOC 11-175)

TenneT presented the current activities within the EU which should result into a new network code: "Requirements for Generators". This code includes requirements for Power Park Modules and will become mandatory for OWF. From the topics mentioned the compensation requirements were challenged and discussed in length. TenneT recognized the fact that the OWF would have less options to mitigate reactive power without the offshore infrastructure. OWF recognized the fact that what can be delivered by the turbines should be part of this requirements to realize the most economical solution. Parties emphasized the approach to use standard type of turbines and not require modified (and therefore expensive) models.

TenneT recognized this concern, but will be bound by the new RfG and can only use discrete infrastructural equipment in an economical way. Parties proposed to have TenneT study a "typical" wind park with sensitivity analysis for the design of the concept and the requirements for the OWF regarding the compensation requirements. With respect of each other's responsibilities and flexibility TenneT accepted to further investigate how this item could be addressed in a proper way.

Action TenneT: Proposal how to proceed with "Dutch" RfG requirements.

4. Any other business

Parties requested a more detailed planning to address these and all the other issues related with the new role from TenneT as offshore grid operator. This will be addressed together with the planning from Ministry of Economic Affairs and addressed in the "werkateliers" by Rob vd Hage.

This meeting was seen as very fruitful and useful and a follow up is needed. This will be organized once TenneT is able to present a draft on the action items.

Action TenneT: Organize follow up meeting.