



**Reply of VGB at the ENTSO-E presentation
dated 12/6/2018 and entitled
“ENTSO-E responses to VGB important items
from 03.03.2018 GC ESC”**

Presented at GC- ESC 14/9/2018



Content

VGB has given a presentation with some issues at the ESC dated 3/3/2018.

ENTSO-E has given a reply at the ESC dated 12/6/2018.

This presentation is a reaction at the ENTSO-E reply.

In general, VGB has following comments the ENTSO-E answers :

- The answers were drafted by legal experts, not familiar with the expectations of developers of new PGMs, meaning certainty / **clarity of regulation**.
- Some answers are describing the text of the RfG NC, **not solving the issue** to the bottom.

Which procedure has to be respected if VGB discovers other issues in the future?

Does VGB have to accept a period of time of 6 months for an answer?

Is another track, respecting the authority of the ESC, possible?

FRT specifications

According to the ENTSO-E monitoring file, following t_{clear} values apply :

For SPGMs type B and C :

- 0,14 sec in GB,
- 0,15 sec in AT, DE, ES, FI, FR (exceptions possible), IE, IT, NL, NO
- 0,20 sec in BE
- 0,25 sec in DK

For SPGMs type D :

- 0,14 sec in GB
- 0,15 sec in AT, DE, DK, ES, FR (exceptions possible), IE, IT, NO
- 0,20 sec in BE, FI,
- 0,25 sec in NL but lower values allowed based on technical arguments

General applied value in CE is 0,15 sec, a higher value is an exception.

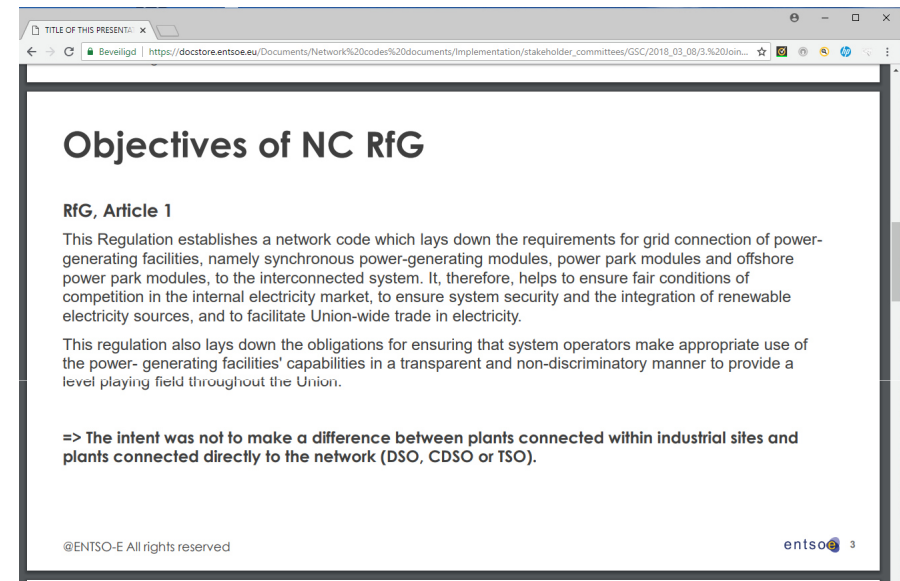
So market distortion is possible for Member States imposing values above 0,15 sec

Is such distortion consistent with the EU view to ensuring the proper functioning of the internal market in electricity as specified in Recital 2 of the RfG code?

Exceptions for combined heat & power production

The most important sentence at this slide is :

The intent was not to make a difference between plants connected within industrial sites and plants connected directly to the network (DSO, CDSO or TSO)



VGB is happy to see that this point of view applies also at all provisions of RfG, e.g. the reactive power capabilities according to Art.18.2.a

Simultaneous voltage and frequency deviation

The answer given by ENSTO-E was drafted by legal experts.
It was also said several times that RfG NC stands above the IEC standards

It is stipulated in Art.16.2.a.ii that the TSO may specify shorter periods of time for simultaneous voltage and frequency deviations.

But how will the TSO define those periods of time?

Is each TSO capable to do this?

If each TSO would define individually those shorter periods of time, this will lead to tailor-made installations across Europe.

And the paramount goal of the network codes to create a **European level playing field will be lost.**

Can a unique reference to the IEC standards solve this issue?

Art.18.2.a additional reactive power

This issue is solved thanks to the clarification mentioned in a previous slide
‘no difference between a private network and a public network’.

For the supply of reactive power :

- If the voltage at the connection point is different from the HV terminals of the step-up transformer of the PGM, the connection at the internal bus bar is considered as the connection point
- If the voltage at the connection point is identical to the HV terminals of the step-up transformer of the PGM, the connection point is at the connection to the network

⇒ The requirements for reactive power apply at the point according to the specification above.

=> **Identical requirements for PGMs connected to an industrial grid as to a DSO.**

Voltage ranges for offshore PPMs

Voltage ranges for offshore PPM

- **VGB**
 - Art. 23 imposes for offshore installations that also test installations (e.g. wave energy of 800 kW) are considered as class D PGMs because table 10 has no under-limit for the voltage. We propose to respect the classification of PGMs and to add 110 kV as under limit in table 10. This would solve also the problem of some 66 kV offshore grids. (66 kV switchboard with $U_{max} = 72,5$ kV unable to respect 115% pu = 75,9 kV)
- **ENTSO-E response**
 - Articles 23 – 28 shall apply to offshore power generating modules and no distinction is made between the classes A - D. The cumulative application of requirements, to which Articles 23 – 28 refer to, defines implicitly offshore power generating modules as of Type D. Consequently the voltage requirements shall be understood accordingly and therefore would not be applicable to voltage levels < 110 kV.

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VGB does not understand the position of ENTSO-E dated 12/6/2018 :

- A type D can also be connected at a voltage < 110 kV.
So the final sentence needs more explanation.
- Is it the intention of ENSO-E to apply NO requirements if the connection voltage of offshore windfarms is < 110 kV?
- The conclusion could be that a derogation request is needed for all experimental tidal devices. Is this the intention of ENTSO-E?

QUESTIONS?