

## Feedback in response to the public consultation on the T&C VSP

In this reaction, Belgian Offshore Platform responds to the public consultation on the proposal of review of the Terms and Conditions applicable to providers of voltage and reactive power control service (T&C VSP) as launched by Elia on 12<sup>th</sup> of November 2021.

BOP remains at disposal for further questions and clarifications when deemed necessary.

## Definitions of Compensator Mode and Injection Mode

The updated definitions are as follows:

Compensator Mode	The operation mode during which a Technical Unit provides the Automatic and/or Manual Control Service Type, while injecting less Active Power than its Minimum Active Power Threshold in injection or while offtaking less Active Power than its Minimum Active Power Threshold in offtake
Injection Mode	The operation mode during which a Technical Unit provides the Automatic and/or Manual Control Service Type, while injecting more Active Power than its Minimum Active Power Threshold in injection or while offtaking more Active Power than its Minimum Active Power Threshold in offtake
Minimum Active Power Threshold	Active Power beyond which a Technical Unit starts delivering the Service

The definitions are not entirely clear to us. As per the definition, the Injection Mode does not only relate to an operation mode during which the Technical Unit (TU) is injecting active power. A TU can be in Injection Mode while consuming active power. This is in line with the graph in annex 12 (two green areas). However, the TU cannot differentiate its prices within the “Injection Mode”, even though the Injection Mode where the TU is injecting power might have a different cost structure than the Injection Mode where the TU is consuming power.

As per the definition, it does not only relate to an operation mode during which the TU is consuming active power. A TU can be in Compensator Mode when injecting active power, or while consuming active power. This is however not in line with the graph in annex 12, where only the area of (low) active power *consumption* is coloured red and labelled “Compensator Mode”.

Even though the definitions only refer to 1 “Minimum Active Power Threshold”, Annex 2 creates thresholds in Injection Mode and in Compensator Mode. We are uncertain as to how they relate to each other.

- Annex 2 seems to suggest that there is only 1 Minimum Active Power Threshold in Injection Mode, which thus should be interpreted symmetrically: i.e. if a TU offers the Services in Injection Mode with a Minimum Active Power Threshold of 1MW, it must deliver the Service as soon as it is injecting more than 1MW *and* as soon as it is consuming more than 1MW.

- At the same time, annex 2 creates the option to define a different Minimum Active Power Threshold to operate in Compensator Mode as well as a Maximum Active Power Threshold to operate in Compensator Mode. So a TU can define a minimum threshold of 2MW and a maximum threshold of 5MW for example, meaning the TU should offer the Service when consuming active power between 2 and 5MW? This does not seem to be aligned with the definition.

How do these 3 thresholds relate to each other? Can a Minimum Active Power Threshold of 1MW be set for Injection Mode, while at the same time setting a 5MW Minimum Active Threshold to operate in Compensator Mode, and what would this mean?

In particular with respect to offshore wind farms (**OWFs**), we do not understand how the different modes are to be interpreted. Some of the newest OWF can, technically, deliver Voltage Services irrespective of whether the OWF is injecting or consuming active power. To maximise the operating modes in which an OWF can deliver the Service, it would want to set the Minimum Active Power Threshold at 0 MW. However, if we then apply the definition of the Injection Mode, the OWF is all of the sudden obliged to *always* offer the Service, irrespective of whether the OWF is injecting or consuming, and he would always be offering in Injection Mode, and never in Compensator Mode. This *de facto* obliges the OWF to increase its power put at disposal for offtake (**PPAD**) and additionally prohibits the OWF from setting different prices between moments of active power injection and consumption. Note that the obligation on OWF to offer the Service when in consumption mode has never been part of the design.

It would seem more consistent to define the following, whereby TU can choose whether they offer in Compensator Mode and/or in Injection Mode and at which thresholds for each:

Compensator Mode	The operation mode during which a Technical Unit provides the Automatic and/or Manual Control Service Type, while offtaking more Active Power than or equal to its Minimum Active Power offtake Threshold and less Active Power than its Maximum Active Power Offtake Threshold.
Injection Mode	The operation mode during which a Technical Unit provides the Automatic and/or Manual Control Service Type, while injecting more Active Power than or equal to its Minimum Active Power Injection Threshold or offtaking more Active Power than or equal to its Maximum Active Power Offtake Treshold.
Minimum Active Power Injection Threshold	Active Power injection level beyond which a Technical Unit starts delivering the Service in Injection Mode. <i>(positive number, whereby higher numbers indicate more injection)</i>
Minimum Active Offtake Threshold	Active Power offtake level beyond which a Technical Unit starts delivering the Service in Compensator Mode. <i>(negative number, whereby lower numbers indicate more offtake)</i>
Maximum Active Offtake Threshold	Active Power offtake level beyond which a Technical Unit starts delivering the Service in Injection Mode. <i>(negative number, whereby lower numbers indicate more offtake)</i>

## II.2.6 Open qualification Procedure

The terms “VSP”, “candidate”, and “qualified VSP” are not always used consistently.

### II.3.3 b)

Suggestion to clarify the following, as the TU’s are not necessarily the VSP’s assets (in terms of ownership):

For the avoidance of doubt, this does not entail any right for Elia to physically access the VSP’s assets and/or the Technical Units without prejudice to any other regulation, i.e. the Federal Grid Code, regarding access to the Elia Grid User’s connection installations

### II.3.12 d)

The article mentions that Each Controlling Technical Unit may absorb or produce Reactive Power for each voltage between 0,925 and 1,05 times the normal operation voltage. We noticed that not all OWF have the same “normal voltage level” defined in their Access Contract, even when they are part of the same grid (i.e. MOG 1). Some have a reference to 220kV whereas others have a 225kV reference. Could this be harmonised?

Can Elia confirm what happens in case the voltage level is beyond this interval? Can the TU continue reacting to the voltage changes (up to its technical limit), and be remunerated accordingly?

### II.3.12 e)

Reference to “Grid Voltage variations at the Access Point” to be replaced with “Grid Voltage variations at the “Service Measurement Point”.

## II.4.1, II.5.1, II.5.9, Annex 2

The wording that assumes the Service is only being delivered when the Active Power is above the Minimum Active Power Threshold is not consistent with Figure 7 in Annex 12. The VSP is providing the Automatic and Manual Control Service in Compensator mode below the Minimum Active Power Threshold in Offtake as defined in Figure 7. The application and definition of the Minimum and Maximum Active Power Thresholds throughout the document needs to be adapted, as proposed in the comment on the definitions.

## II.5.8

Following mark-up for consistency purposes:

“Once a Technical Unit has been restarted and is injecting or offtaking Active Power above or equal to its Minimum Active Power Threshold, irrespective of the last Setpoint sent by Elia, it is agreed that the Technical Unit shall supply the Service based on the Reference Setpoint set in Annex 1.”

## II.7.1 c, Annex 3 & Annex 6 (delivery control of the Automatic Service)

Delivery control of the Automatic Service is based on the analysis of 6 samples of 5-hour blocks. These samples are however not random, but chosen by Elia and therefore not necessarily a fair representation of the delivery performance of a TU during the month. For a TU that delivers the Service almost continuously, such as an OWF, these 6 samples represent a mere 4% of the time (30h / 720h), yet can lead to a disproportional loss in remuneration.

We suggest performing the delivery control for the Automatic Service on all the quarter-hours where the TU was delivering the Automatic Service to get a fair representation of the performance.

Annex 3 also mentions that in order to avoid a double penalization, quarter-hours for which a Reactive Power volume has already been penalized through the access tariff will not be considered in the delivery control of the Service.

Although we obviously agree with this principle, we have no way of checking this as the underlying data leading to the access fees under the access contract are not shared, not even with the access contract holder. We would request that the detailed calculation of the access tariffs that relate to reactive power is either shared in the context of the access contract or in the context of the VSP contract.

We would also suggest to apply this principle in both directions, i.e. if a TU is penalised under the VSP contract, no additional penalisation should be applied under the Access Contract.

#### II.7.2, Annex 4 & Annex 7 & Annex 8

Annex 4 mentions: "Elia tolerates a deviation in the delivery of the Service for each quarter-hour". The reference to a quarter-hour does not seem relevant with respect to control of the manual service, as the control consists of checking whether the Setpoint (+/- Tolerance) is achieved and held for at least 60 seconds within 5 minutes after the Setpoint.

Can you please clarify whether the measurements mentioned are the *averages* of the Q of the 30s following the time from the table in Annex, or the non-aggregated value at that point in time?

For TU offering both the Manual and the Automatic Service, it has always been communicated by Elia, and it is thus so implemented in the IT-systems of the OWF offering the Service, that the TU must "hit" the Setpoint, but can then immediately start moving along its droop curve (i.e. offering the Automatic Service). This concept is also confirmed in Article II.5.6. The control procedure in Annex 4 however, requires the Setpoint to be held for 2 consecutive measurements (i.e. for 1 minute).

This new requirement is also elaborated upon in Annex 8. This is an important deviation in the requirements, and contradictory to what Elia has instructed the OWFs in the past, and how the prequalification tests for the VSP service have been set up and conducted in the past.

This would entail a significant change in IT settings for all the OWFs that have so far not implemented this as such. Any additional costs in relation to this change, must be reimbursed under the VSP contract.

In order to avoid those costs, we would suggest allowing for only 1 measurement within the first 5 minutes to be within the tolerance band around the Setpoint for those TUs that deliver both the Automatic and the Manual Service. For a TU to change its IT-system in order to hold on to a Setpoint for a longer period of time, would be costly and time-consuming, as it entails switching between Q-control and V-control based on Setpoints and timings.

Annex 7 describes the penalty for non-delivery of the manual control service type. At the end of the annex, reference is made to a situation whereby the VSP fails to confirm reception of the activation message. This would lead to the entire Setpoint being considered as "missed". This implies that a communication error is being dealt with in the same way as a non-delivery error, which seems excessive.

#### II.9.2

To align the contract with the existing invoicing practice, we propose the following amendments:  
"The sum of the penalties under Art.II.9.1 will be subject to a monthly cap, without prejudice to any liability on the part of the VSP for the non-fulfillment of his obligations in accordance with Art. I.6 of the General Conditions. The penalty for each month may not exceed the VSP's remuneration for the

Service as set in Art. II.8.3 for this month for the concerned Technical Unit or the aggregation of Technical Units as per Art. I.1.1 b).”

The reference to Art. I.1.1 b) at the end also seems incorrect. Can Elia clarify which article it wishes to reference?

The penalty is applied as a ratio of, and thus capped at, the remuneration for Service activation. Without our amendment, the contract could be interpreted as capping the penalty at the total remuneration under the Contract, which consists of the remuneration for the Service (art II.8.3) and a compensation for the increase in PPAD (art II.8.5).

Our proposed amendment, which mirrors the wording in Annex 6, would exclude the “remuneration” related to the increase in PPAD, which is not a remuneration for the service as such, but a compensation of a cost that the TU must bear in order to supply the Service (i.e. it is unavoidable), and because it was chosen, by Elia, to compensate this cost under the VSP contract rather than disregard the cost under the access contract.

In particular for OWF, the cost of an increase in PPAD is a multiple of the potential revenue from Service activation. If OWFs are at risk of not having this cost remunerated and thus face potential large losses with regards to the VSP contract, they will choose not to offer the Service when consuming active energy, as the reward (i.e. additional activation costs when in consumption mode) does not compensate the risk.

In the article II.3.3 two additional references are made to the suspension of remuneration; specifically bullets b) and d) relating to compliance with the FGC and the alfa-component and the communication requirements respectively. We would prefer that the Contract stipulates also in those instances that it relates to the remuneration for activation of the Service as part Art. II.8.3, for the reasons elaborated above. It is possible that a TU experiences temporary IT-issues affecting the communication line between the asset and Elia. For that period, the VSP should indeed not be rewarded for delivering the Service, but it should not be punished additionally by also losing the compensation for its increase in access tariffs.

## Annex 2

The reset of Vstartup and Qinitial are not perfectly aligned as per the definitions, whereas we understand they should be?

The current differences are:

- Qinitial is measured and reset the QH after the TU started up for the last time whereas Vstartup is measured and reset the QH in which the TU started up for the last time. Is this the intention?
- Qinitial is reset the QH after a manual Setpoint was *reached*, whereas Vstartup is reset the QH after a manual Setpoint was *sent*. If a Setpoint was sent in the last 5' of a QH, this can be a different QH. How does Elia treat Setpoints that were sent but not reached in this context? Is the Vstartup reset, but the Qinitial not? It is also noted that in the example provided in Annex 2, both Qinitial and Vstartup are in fact reset in the next QH.
- We notice that in practice, both Qinitial and Vstartup are reset when an OWF changes from net active power injection to net active power offtake. In the case of an OWF continuously offering the Service in both Injection and Compensator mode, this is not captured by the sentence “the QH at which the TU started up for the last time”, even when switching from active power offtake to injection..

In the section “Setpoint request – Manual Control Service Type”, we read the following:

“For the quarter-hour following(s) during which Technical Unit is expected to ramp-up its production of Reactive Power for the Manual Control Service Type (as per requirements in Art. II.5) Qreq will correspond to the entire volume requested for this quarter-hour.”

Our understanding is that the explanation in this section applies to any Setpoint, and not only to Setpoints requiring a ramping-up of the production of Reactive Power (i.e. also Setpoint requiring a ramping-down of production, or a Setpoint requiring an absorption of Reactive Power).

The remuneration of quarter-hours in which a Setpoint is sent, is based on the requested Setpoint. For a TU that offers both the Manual and the Automatic Service, this implies that for those quarter-hours he is, in fact, only remunerated for his Manual Service and not for the Automatic Service. In particular in instances where a Setpoint of  $Q=0$  is sent, the TU does de facto not receive any compensation for that quarter-hour even though the delivered MVARh in that QH are without a doubt different from zero, due to (1) the Automatic Service that takes over immediately after a Setpoint was reached and (2) if a Setpoint is sent relatively late in the QH, the MVARh exchanged prior to that Setpoint but within that QH are not remunerated.

We understand that the calculation for those QH cannot be based on the formulae for the Automatic Service, as the  $Q_{initial}$  and  $V_{startup}$  needs to be reset the QH after the Setpoint was reached (to ensure stable & representative values), and we understand that a TU only delivering the Manual Service is not remunerated for Setpoints  $Q=0$ , as such a Setpoint would be the default situation of said TU. For TU delivering both the Automatic and the Manual service however, we do feel a remuneration is justified. Such remuneration could be based on the actually measured MVARh exchanged in those quarter-hours. This data is already part of the invoicing and control calculations.

## 2.B Determination of the Price(Qhn)

This section introduces a new interpretation on the remuneration for the volume which occurs in the upper price bands. To ensure all parties have equal opportunity to implement this new interpretation in the relevant calculations, it should not be applied for the upcoming delivery year 2022.

Referring to the provided example, we would have expected a remuneration of  $Remuneration(Qhn) = 200 * 1/4 * Price_2$ , instead of the remuneration as stated in the example of  $Remuneration(Qhn) = 187.5 * 1/4 * Price_1 + (200 - 187.5) * 1/4 * Price_2$

## Annex 5

For those units where alpha eq has already been determined in the context of the VSP T&Cs of a previous year, this original value should be retained. Can Elia confirm this?

## Annex 7

In the example provided, the new interpretation for the remuneration for the different price bands as introduced in Annex 2.B is not considered. This would mean that the penalty for the reactive power not supplied in case of Manual Setpoints in the upper price bands is no longer proportional to the related remuneration and the penalty factor is in fact significantly higher than 1,5.