CONSULTATION REPORT

Report on the public consultation regarding the proposal of review of the Terms and Conditions applicable to providers of voltage and reactive power control service *(T&C VSP)*

22th April 2022

Contents

1. Introduction

Elia organized a public consultation from the 12th of November 2021 to the 13th of December 2021 regarding the proposal of review of the Terms and Conditions applicable to providers of voltage and reactive power control service (T&C VSP).

The purpose of this report is to consolidate the feedback received from the public consultation, while at the same time reflecting Elia's position on these reactions.

2. Feedback received

In response to the public consultation, Elia received the following non-confidential replies from the following parties:

- Belgian Offshore Platform (BOP)
- FEBEG
- Febeliec

All responses received haven been appended to this report. These reactions, together with this consultation report, will be made available on Elia's website.

3. Instructions for reading this document

This consultation report is structured as follows:

- Section 1 contains the introductory context,
- Section 2 gives a brief overview of the responses received,
- Section 3 contains instructions for reading this document,
- Section 4 discusses the various comments received during the public consultation and Elia's position on them,
- Section 5 describes the next steps
- Section 6 contains the annexes of the consultation report.

This consultation report is not a 'stand-alone' document, but should be read together with the proposal submitted for consultation, the reactions received from the market participants (annexed to this document) and final proposal.

Section 4 of the document is structured as follows with additional information on the content per column below.

Subject/Article/Title	Stakeholder	Comment	Justification
A	B	C	D

A. Subject matter covered by the various responses received.
B. It is indicated who made the comment. In general, the comments are listed alphabetically in the name of the parties concerned.
C. This document contains an overview of the main, but also specific comments on the document submitted for consultation.
    - In doing so, an attempt was made to list/consolidate all comments received and to argue whether or not they should be taken into account.
    - In order to maintain authenticity, the comments have been copied as much as possible in this document. However, the comments have sometimes been shortened and term have been uniformed to make them easier to read.
    - For clarification purposes, it is recommended to always include the original comment of the stakeholder concerned, as included in the appendix to this report.
D. This column contains Elia's arguments as to why a comment was or was not included in the final proposal. However, this column does not contain the final text. For this purpose, the final proposal must be consulted.

4. Comments received during the public consultation

4.1 General comments received during the public consultation

This section provides an overview of the general reactions and concerns of market players that Elia received to the document submitted for consultation.

SUBJECT	STAKEHOLDER	FEEDBACK RECEIVED	ELIA'S VIEW
General comment	Febeliec	Despite explicit comments made during the study-phase in the course of 2018 and during the consultation phase of the VSP-contract in 2020 and despite numerous discussions with at least one of the Febeliec members in the course of 2021 in this respect, Febeliec has to observe that the text still seems to consider that the voltage service will be provided by generation assets, clearly not paying sufficient attention to other sources, such as for example capacitor banks or frequency drives, that can also fulfil the service requirements. Where the text of the VSP-contract in general seems to be acceptable for the generation assets, the fact that this revised draft VSP contract still lacks appropriate attention to and specific rules suitable for other potential sources like capacitor banks is not only disappointing, but it is also to be expected that due thereof the other sources will not be able to participate to this service or that they will decide that is economically and organisationally not feasible to participate to this service… Febeliec also regrets that Elia in general sticks to the status quo and, contrary to what is suggested in the explanatory note, does not use the opportunity to amend the contractual framework in such a way that important improvements or other interesting features with respect to this service could be developed,	First of all Elia thanks Febeliec members who actively participated in the course of 2021 to the service and who provided their comments, return of experience and suggestions on this specific service. Elia reminds that return of experience gathered through participation to the service in 2021 and 2022 (years where the current T&C VSP applies) will allow to analyze and propose improvements of the T&C VSP. In this respect, Elia thinks that some additional return of experience is necessary before being able to analyze and propose concrete improvements of the VSP contract based on the different idea's mentioned in Febeliec's answer. Elia must indeed have sufficient experience and confidence before being able to adapt the VSP contract coherently and in a fair way for all types of technical units. Besides, Elia wants to remind that the current T&C VSP is already open to DR technologies. Therefore Elia clarified the table in article II.3.3 to avoid any confusion. Moreover, based on the discussions held with the concerned market parties in 2021, Elia

		taking into account the experiences gained in 2021 (e.g. specific tolerance band taking into account local production; additional pooling opportunities; the option to offer variable volumes (e.g. via realtime feedback signals) is still made impossible; impossible to match tolerance bands, which are clearly developed to cope with the centralised stepless generator, with (the pooling of) discrete volumes, unacceptable requirements with respect to 30" real-time measurements not taking into account the specific situation of e.g. frequency inverters on a CDS, etc.).	is of the opinion that the participation of capacitor banks is not in contradiction with the current T&C VSP modalities even though some clarifications and precisions might be possible in a future version once their relevance is confirmed by return of experience. Elia also confirms its willingness to continue fruitful discussions with market parties providing the service in 2022 in order to collect any return of experience that will lead to improve the framework for the integration of new kinds of assets in the service.
General comment	Febeliec	With respect to closed distribution systems, Febeliec wants again to stress the central role of the CDSO as relevant system operator for the underlying technical units in its grid and the central role of the CDSO as VSP. In this respect, Febeliec observes that the contractual framework is not yet fully considering the situation where the MVAr service is provided by a CDSO as VSP (via technical units of the CDSO itself or of the CDS Users) (e.g. the Access Point of the CDS differs from the Service Measuring Point).	First of all Elia agrees with Febeliec on the central role of the CDSO in the provision of the service to Elia and reminds that it is because of this central role that Elia proposed a design where the CDSO is the VSP. Elia does not fully understand Febeliec's point concerning the impact of the owner of the technical unit connected to a CDS on the provision of the service at the access point level but is ready to discuss the point further for the next version of the T&C VSP.
General comment	FEBEG	Overall, FEBEG welcomes the clarifications and improvements made in the T&C VSP. However FEBEG is of the opinion that some points can still be further improved. Some specific remarks can be found below. Additionally, FEBEG would like underline on overall and important concern. Currently, the MVAR tendering is a market based process, this basic market based principle is a key principle for FEBEG and its members, therefore, we insist on the market procedure (tendering) to be kept also beyond 2022.	Elia thanks FEBEG for the supportive comment. Elia would like to remind that the target design for the voltage and reactive power control service has been described in a design note in 2018. In this document, Elia described the future vision concerning the procurement of the service evolving from a tendering procedure with free prices to a general obligation to provide (for some technical units) – or voluntary participation for other technical units – with regulated price(s). Elia's intention is

			still to implement the target design, yet depending on the necessary related modifications of the legal framework.

4.2 Specific comments received during the public consultation

SUBJECT	STAKEHOLDER	FEEDBACK RECEIVED	ELIA'S VIEW
Definition of Compensator Mode and related articles and annexes	BOP	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.	Elia understands from the comments of market parties that the definitions of Compensator Mode and Minimum Active Power Threshold and the annex 1 and Figure 7 of Annex 12 need to be clarified to avoid any confusion. Elia has clarified the definition of Compensator Mode and added some definitions related to the Minimum Active Power Thresholds as follows: • 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 its Minimum Active Power Threshold in Compensator Mode and less Active Power than its Maximum Active Power Threshold in Compensator Mode ; • Minimum Active Power Threshold in Injection: Injected Active Power beyond which a Technical Unit starts delivering the Service in Injection Mode; • Minimum Active Power Threshold in Offtake: Offtaken Active Power beyond which a Technical Unit starts delivering the Service in Injection Mode;

		• 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.	• Minimum Active Power Threshold in Compensator Mode: Offtaken Active Power beyond which a Technical Unit starts delivering the Service in Compensator Mode; • Maximum Active Power Threshold in Compensator Mode: Maximum offtaken Active Power beyond which a Technical Unit stops delivering the Service in Compensator Mode; The annex 1 and the reference to the Minimum Active Power Threshold in the contract have been adapted accordingly. Elia has also modified the Annex 12 by adding some figures (replacing the current Figure 7) to support and explain these modifications. Concerning Febeliec's remark, Elia thinks that the definition of Compensator Mode does not impact the starting procedure of large generation assets in a CDS as the service in Compensator Mode is not intended to be delivered when a unit is starting up. Elia thinks that the updated definition should solve the confusion. Elia also refers to its answer concerning the general comment of Febeliec about the starting procedure.

		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. (positive number, whereby higher numbers indicate more injection) • Minimum Active Offtake Threshold: Active Power offtake level beyond which a Technical Unit starts delivering the Service in Compensator Mode. (negative number, whereby lower numbers indicate more offtake) • Maximum Active Offtake Threshold : Active Power offtake level beyond which a Technical Unit starts delivering the Service in Injection Mode. (negative number, whereby lower numbers indicate more offtake) Art. II.4.1, II.5.1, II.5.9 and 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.	
	FEBEG	As specified in Annex 12, the Injection Mode is characterized by an Active Power - either in injection or in offtake - exceeding a Minimum Active Power Threshold (specific for the Injection Mode), while the Compensator Mode is characterized by an Active Power comprised between a Minimum and a Maximum Active Power Thresholds (specific for the Compensator Mode). The definition of "Compensator Mode" and Figure 7 of Annex 12 should be adapted to avoid the confusion between the different thresholds.	
	Febeliec	The changes made to the definition of Compensator Mode may lead to operational difficulties and do not take into account the outcome of the discussions that occurred in 2021 with respect to starting procedures of (large) generation assets on a CDS	
Art. II.5.9	Febeliec	this section does not take into account the various discussions and lessons learned from 2021 with e.g. impact on the Access Point of a CDS and related fines. It should be added to this Art. II.5.9 that any adverse effects on the Access Point of the CDS to the Elia Grid, which under normal circumstances would result in penalties, fines or any other (additional) costs to be paid by the CDSO, will be fully disregarded by Elia and will be considered as being not attributable to the CDSO.	Elia understands that Febeliec's point is about the starting procedure of a technical unit during which the access point's tariff for the offtake or injection of additional reactive energy could be impacted due to the increase of active power produced by the technical unit during the start-up phase and before this latter starts providing the service (i.e.before any correction of reactive power applies). Elia has precised in the article that this command is not applicable during the starting-up phase.
	FEBEG	"When the Technical Unit is injecting or offtaking less than its Minimum Active Power Threshold (as agreed in Annex 1), Elia may request via an explicit order that the Technical Unit stops producing or absorbing Reactive Power".	• Elia reminds that this command can only be applied to stop the reactive power production or absorption meaning that any correction with a requested volume would be equal to 0 MVAR.

		• In this case Elia should also apply a correction on the tariff for the offtake or injection of additional reactive energy as per section 2.2 of the access tariffs. • During start up and shut down phases it is operationally very complicated to react to MVAR orders of Elia. These phases (under the Minimum Active Power Threshold) should be excluded in this paragraph.	• Elia agrees with FEBEG's point and has taken this into account in the contract. The article has been adapted accordingly
Annex 1	Febeliec	the reference to "Minimum Active Power Threshold to be able to supply the Technical Control Band in Injection Mode" does not seem to fit with the amendment to art. II.4.1 which now also refers to offtake.	Elia has adapted the annex 1 by creating two specific columns for the Minimum Active Power Threshold in Injection and Minimum Active Power Threshold in Offtake according to the modified definitions as described in the point about the definition of Compensator Mode in this report.
	FEBEG	Definitions of Qtech,min and Qtech,max : is Qtech,min not always referring to absorption and Qtech,max always to production ?	Elia confirms FEBEG interpretation and has adapted the definitions of Qtech,min and Qtech,max in the Annex accordingly. The case that Elia had in mind by allowing a Qtech_min in production (respectively a Qtech_max in absorption) concerned technical units that would only be able to produce (resp. absorb) reactive power. Nevertheless, these cases are currently only theoretical and are withdrawn to avoid confusion; they could be further described in the future if their effective existence is confirmed.
Annex 2	Febeliec	• Febeliec questions whether the formula for Remuneration (Qhn) is correct, in particular the division by 4 if all components are already quarter-hourly based? • In Unorm_exp reference is made to the "Technical Unit's Connection Contract", whereby Febeliec already mentioned in previous consultations that this does not fit within a CDS context (since the Connection Contract is entered into on a CDS-level and not on a Technical Unit-level). • Technical Pmax: see comment with respect to the definition.	• Elia confirms this is indeed correct as the Reactive Power Requested in the formula is in MVAr and the price is in €/MVARh • Both definitions of Unorm_exp and Technical Pmax have been adapted to consider the case in which a technical unit is not included in a Connection Contract/ OPA contract with Elia. In this case, these values have to be agreed between Elia and the VSP.

		• Febeliec thanks Elia for inserting sections 2.A.2 and 2.B which provide for additional clarification.	
	FEBEG	• *"During the quarter-hour during which a setpoint is received by the technical unit : Qreq = Qreq_manual."* For the correction of the tariff for the offtake or injection of additional reactive energy, it is not realist to consider that the technical unit has effectively delivered Qreq_manual as average during this quarter-hour. The correction for this quarter-hour should be based on the measured reactive energy production or absorption by the technical unit. • *Qinitial and Vstartup:* o Can Elia confirm and clarify in the text that for "the last moment in time where the Technical Unit's Active Power injection or offtake value started to exceed its Minimum Active Power Threshold value", the exceeding should be considered in average over the quarter-hour ? • Qinitial : o To improve the readability, we propose to rephrase the condition related to the Setpoint as such : " [...] or measured at the quarter-hour after a manual Setpoint is reached" • Vstartup : o Can Elia confirm and clarify in the text that Vstartup is also reinitialized at the quarter-hour after the quarter-hour during which the unit started up, like for Qinitial ? o Is Vstartup reinitialized at the quarter-hour following a Setpoint request, or at the quarter-hour after a manual Setpoint is reached, like for Qinitial ? • Remuneration principle for a Controlling Technical Unit	• Elia reminds that the logic of the remuneration and hence also the correction of the tariff for the offtake or injection of additional reactive energy is based on the requested reactive power and not on the measured reactive power (which is only used for calibration). Elia is not in favor of changing this approach which is also coherent with the balancing services for which the requested value is used for both the remuneration and the correction of the BRP perimeter. • Qinitial and Vstartup: o Elia indeed confirms that this is in average over the quarter-hour. This has been clarified in the contract by referring when necessary to "$P_{measured}$" whose definition in article II.1 has been also modified to clarify that it is an average active power over a quarter-hour. • Qinitial : o Elia has adapted the definition to improve readability • Vstartup : o Elia confirms that both Qinitial and Vstartup are reinitialized at the quarter-hour following the quarter-hour during which the unit started up. This has been precised in the text.

		○ Qh1 : Qinitial and Vstartup are reinitialized during this quarter-hour. Qreq is then equal to Qinitial • 2.A.1. The example with the table is very useful. Is it possible to include also a start and a stop of the technical unit ?	○ Elia confirms that both Qinitial and Vstartup are reinitialized at the quarter-hour following the quarter-hour during which the manual setpoint is requested. This has been pre-cised in the text. • Remuneration principle for a Controlling Technical Unit ○ The example has been adapted so that the initialization of the Qinitial and Vstartup are made on Qh0 • 2.A.1. Elia has modified the example to include a start and a stop of a Technical Unit
	BOP	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.	• The definition of Vstart-up and Qinitial have been clarified in the annex to clarify that: ○ both Qinitial and Vstartup are reinitialized at the quarter-hour following the quarter-hour during which the unit started up. ○ both Qinitial and Vstartup are reinitialized at the quarter-hour following the quarter-hour during which the manual setpoint is re-quested. Concerning the section" Setpoint request – Manual Control Service Type", Elia agrees with BOP's comment and has modified the text by referring to ramp-up and ramp-down of the production or absorption of reactive power.

		• 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.	Concerning the remuneration of quarter-hours in which a Setpoint is sent, Elia reminds that the logic of the remuneration and correction of the tariff for the offtake or injection of additional reactive energy is based on the requested reactive power and not on the measured reactive power (which is only used for calibration). Elia is not in favor of changing this approach which is also coherent with the balancing services for which the requested value is used for both the remuneration and the correction of the BRP perimeter.

		We understand that the calculation for those QH cannot be based on the formulae for the Automatic Service, as the Qinitial and Vstartup 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. Annex 2B This section introduces a new interpretation on the renumeration 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 renumeration of $Remuneration(Qhn)$= 200)$*$1/4$*Price$2, instead of the renumeration as stated in the example of $Remuneration(Qhn)$=187.5$*$1/4$*$ $Price$ 1 + (200−187.5)$*$1/4$*Price$2	Concerning the comment on the Annex 2B, Elia does not agree with BOP's comment in the sense that it is not a new interpretation. Elia reminds that this remuneration mechanism has not been introduced in this version of the T&C VSP. In the contrary this rule is already in application for several years including the T&C VSP applicable for 2021 & 2022.
Annex 7	Febeliec	the logic of section 2.B of Annex 2 is not transposed into this Annex 7? Is this a deliberate action?	Elia understands from the feedback of market parties that this change of penalty formula raises several questions. Consequently, Elia re-introduces the original formula currently applicable in the valid VSP contract of 2022 which is based on the price of the last MVAr supplied. Indeed no claims have been submitted by market parties on that formula and Elia has not observed any misconduct due to it. Possible more fundamental improvements of the penalty formula will be analyzed in the
	BOP	In the example provided, the new interpretation for the renumeration 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 renumeration and the penalty factor is in fact significantly higher than 1,5.	

			future and discussed between Elia, market parties and the CREG.
Definitions	Febeliec	Technical Pmax: reference is made to the OPA contract, but what about units for which no OPA contract exists?	The definition of Technical Pmax has been adapted to consider the case in which a technical unit is not included in a OPA contract with Elia. In this case, this value has to be agreed between Elia and the VSP.

Art II.3.1	Febeliec	Reference is made to Elia Grid Users, where also reference should be made to CDS Users.	The article has been modified to also refer to CDS Users.
Art II.3.3	Febeliec	reference is made to “direct clients demand facilities”. It is unclear to Febeliec which assets are targeted by this description. Does this also relate e.g. to capacitor banks or frequency drives on a CDS?	The table in article II.3.3 has been clarified by referring in the last row to the technical units without obligations to provide the service such as demand facilities directly connected to the Elia grid and technical units connected to a CDS or a distribution grid (including capacitor banks)
Art. II.3.10/II.3.13 and II.5.3	Febeliec	This section makes the provision of variable volumes impossible	Elia refers to his answer to the general remark of Febeliec considering the possible improvements that could be brought to the contract.
Art II.3.4 b)	Febeliec	• no pooling possible for capacitor banks or frequency drives or at the level of the Access Point to the Elia Grid? • the requirement to use real-time active power measurements at each Service Measurement Point is economically not feasible and is impossible to implement when it concerns e.g. various frequency inverters	Elia thinks that this article does not prevent pooling possibilities and also reminds that the requirement to use real-time active power measurements at the Service Measurement Point only

		(which for the provision of this service should be taken as a whole and considered as one virtual point) (alternative ways of providing feed-back on availability should thus in any event be possible as well)	applies for PPM and PGM as stated in this article. Elia also refers to his answer to the general remark of Febeliec considering the possible improvements that could be brought to the contract.
Art. II.5.1	Febeliec	this section is not suitable for capacitor banks and in view of pooling possibilities (see also our comment on article II.3.4 b).	Elia refers to his answer to the general remark of Febeliec considering the possible improvements that could be brought to the contract.
Art. II.5.7	Febeliec	this section has not been amended and as such does not take into account the various discussions and lessons learned from 2021 with respect to e.g. starting procedures of (large) generation assets on a CDS (see also our comment on the amended definition of "Compensator Mode"). It is obvious (and should be clearly reflected in the text of art. II.5.7 of the VSP-contract) that on a CDS not Elia but the CDSO, acting as RSO, should determine the setpoint, in the first place to regulate the correct voltage profile on the CDS, and in the second place to avoid adverse effects on the Access Point of the CDS resulting from the delivery of the MVAr service by Technical Units located behind the Access Point of the CDS to the Elia grid	Elia understands that Febeliec's point is about the starting procedure of a technical unit during which the access point's tariff for the offtake or injection of additional reactive energy could be impacted due to the increase of active power produced by the technical unit during the starting phase and before this latter starts providing the service. Elia thinks that this point is independent of the VSP contract as it concerns a period (i.e. the starting procedure) in which the service is not delivered (the technical unit being below the minimum active power threshold). Concerning the determination of the setpoint mentioned in this article, Elia would like to mention that the value of this setpoint is to be set in the annex 1 of the contract by the VSP which is by default the CDSO in case the service is delivered by a technical unit connected to a CDS.
II.6.7	Febeliec	it would be better if active feedback could be given (via interface) instead of using e-mail or telephone.	Elia takes note of Febeliec remarks and will consider it when analysing the global return of experience of the delivery of the service.

Art. II.7.1 and II.7.2	Febeliec	the deleted text boxes should be reinserted as this is absolutely essential for the delivery of the service by the CDSO as VSP.	First, Elia would like to mention that all text boxes have been deleted because they are redundant with the elements mentioned in other articles or annexes of the contract. For these articles in particular, the elements described in these boxes are a direct consequence of the definition of "Service Measurement Point" which can be defined lower than the access point in the conditions specified in the Annex 13 of the contract. Indeed defining the service measurement point below the access point as per modalities described in article II.3.4 a) and Annex 13 directly implies that the activation control will be performed at this point.
II.9.1	Febeliec	please explain the meaning/impact of "at least".	Elia has removed these words as they do not add any relevant information in this article
Annex 4	Febeliec	reference is made only to reactive power supplied, where in art. II.7.2 reference is also made to grid voltage?	Elia removed the reference to the Grid Voltage measurement in the article II.7.2 as voltage measurements are not used for the activation control of the manual control service type
Annex 6	Febeliec	what happens if %Qfailed is e.g. 30.5%?	Elia has adapted the formulation to precise that the 25% reduction of the remuneration applies if %Qfailed is above 30% and below or equal to 80% (and similarly that the 100% remuneration reduction applies if the %Qfailed is above 80% and below or equal to 100%)
Annex 11	Febeliec	as mentioned in previous consultations, Febeliec assumes that CDS users should not use this Annex 11 to designate the CDSO as a VSP, since the CDSO already by definition acts as a VSP for the Technical Units in the CDS.	Elia confirms that the Annex 11 is not to be signed by a CDSO intending to become VSP on a voluntary basis. Nevertheless, the CDSO has to sign the annex if he intends to designate a third party to take the VSP role. If a CDSO wants to become VSP with Technical Units from a CDS User, Elia still requires a proof of an agreement between the CDSO and the CDS User for the participation to the service as mentioned in article II.2.4 of the contract. .

Art. II.8.5	FEBEG	It should be also possible to include in the remuneration a compensation as a fixed term to recover the investment costs linked to adaptations that go beyond what is strictly required by the legislation.	Elia does not think that any additional compensation in the remuneration of the service is necessary as the VSP contract does not require adaptations that go beyond what is required by the legislation. Indeed the articles of the Federal Grid Code indicates the capabilities in terms of voltage and reactive power control for different types of technical units that are obliged to provide the service. As the contract respects these modalities (and refers to them in article II.3.3), Elia does not see why the contract requires any additional adaptations.
Art II.2.6	BOP	The terms “VSP”, “candidate”, and “qualified VSP” are not always used consistently.	The terms used in this article have been harmonized
Art II.3.3 b)	BOP	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	This has been adapted by referring to Technical Units directly
Art II.3.12 b)	BOP	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?	Elia precises that the differences in the normal operation voltage level come from different voltage references used in the past and current legislations. Elia is ready to discuss about these levels with the different offshore parks. The voltage interval between 0.925 and 1.05 is the normal operational voltage range and specific actions can be taken in case

			the voltage goes beyond this interval as specified in Elia's Defense Plan (section 7.2)[1]. Elia confirms that the service can still be delivered beyond this voltage interval and that the service will of course still be remunerated.
Art. II.3.12 e)	BOP	Reference to "Grid Voltage variations at the Access Point" to be replaced with "Grid Voltage variations at the "Service Measurement Point".	Elia has corrected the article accordingly
Art II.5.8	BOP	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."	Elia has adapted the article accordingly
Art. II.7.1 c), Annex 3 and 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.	Elia does not see reasons to change the activation control of the automatic control service type at this stage as return of experience and analysis would be necessary to assess the differences in terms of impacts between a control based on representative samples and a continuous control. This requires a sufficiently large period of time to make a representative analysis that will have to be considered also taking into account the impact analysis concerning the implementation of such a change in Elia's settlement tools. Concerning the access to the details of the data leading to the access fees, Elia reminds that these can be requested by the market parties to Elia in the context of the access contract.

[1] The Defense plan is available on the Elia website: **https://www.elia.be/en/electricity-market-and-system/emergency-situations**

		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.	Concerning the application of the principle in both directions, Elia reminds that the principle consists in avoiding double-penalty what is guaranteed with the mechanism put in place (i.e. a penalty for delivery control in the context of the voltage and reactive power control service could not be applied in addition to a penalty coming from the application of the tariff for the offtake or injection of additional reactive energy
Art II.7.2, Annex 4, Annex 7 and Annex 8	BOP	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).	Elia has corrected this part of annex 4 by referring to the "requested Setpoint" instead of "quarter-hour" Elia precises that the 30" measurements are the non-aggregated values at that point in time. Concerning the comment about the communication of a Setpoint and the related activation control mechanism, Elia reminds that this process has not changed in comparison to the current VSP contract and that only wording adaptations were made in this reviewed version. Elia understands BOP's remark but wants to remind that the probability to have a penalty is considered as low due to the application of a tolerance band. A penalty could only occur in case of a large variation of voltage at the moment the technical unit reaches the setpoint as this variation could lead to a change of reactive power induced by the automatic control leading a reactive power production or absorption going

		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.	beyond the tolerance band. Finally, Elia is not in favor of weakening the delivery control of the manual service applied to all VSPs to cover this specific point. Concerning the penalty resulting from a failure to confirm the reception of the message, Elia wants to remind that the correct exchange of messages is key for the delivery of the service so that a communication error also leads to an incorrect delivery of the service that should be penalized the same way.
Art 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	Elia precises that the reference is made to the article II.3.4 b) and apologizes for this small typo that only appeared in the track-change version. Elia agrees to adapt the article II.9.2 following BOP suggestion as the compensation of the PPAD should indeed not be part of the cap on the penalties. Elia also agrees to adapt the articles II.3.3 b) and d) as the suspension of the remuneration should

		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	indeed only concern the remuneration of the service and not the compensation for the cost induced by the increase of the PPAD which is anyway paid by the ACH.

		should not be punished additionally by also losing the compensation for its increase in access tariffs.	
Annex 5	BOP	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?	Elia confirms that the sensitivity coefficient determined during the previous prequalification tests for the service can be retained, unless major change of the technical characteristics of the technical units have occurred.

5. Next steps

On the basis of the reactions received from market players and its views, as set out in this consultation report, Elia will finalize the proposal of review of the Terms and Conditions applicable to providers of voltage and reactive power control service (T&C VSP). The updated T&C VSP, together with this consultation report, will be provided to the CREG.

6. Attachments

The reactions Elia received to the document submitted for consultation:

- Belgian Offshore Platform
- FEBEG
- Febeliec

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