



# Consultation report on the T&C Voltage Service Providers

## Market Development

17/04/2020

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# 1 Introduction

In accordance with Article 234 of the Federal Grid Code, Elia organized a public consultation on the Terms and Conditions to act as Voltage Service provider (T&C VSP). These T&C VSP translate the design evolution of the service for reactive power and voltage control that was first described in a [design note](#) published in 2018

Elia publicly consulted the T&C VSP in English from the 27<sup>th</sup> of January 2020 to the 24<sup>th</sup> of February 2020 and the T&C VSP in French and Dutch from the 20<sup>th</sup> of March 2020 to the 8<sup>th</sup> of April 2020 in order to gather feedback from the market players. The documents under consultation can be found on [the Elia website](#).

Elia received **one anonymous and 5 non-confidential responses** on the T&C VSP during the first consultation. The following stakeholders gave non-confidential responses:

- Febeliec
- Febeg
- RWEST
- Belgian Offshore Platform (BOP)
- Nemo Link

Elia received **two non-confidential responses** on the T&C VSP during the second consultation from the following stakeholders:

- Febeliec
- Febeg

All non-confidential received responses can be consulted on Elia's website.

This consultation report consolidates the contributions received and provides Elia's response to the comments made.

## 2 Stakeholders contributions – Consultation from the 27<sup>th</sup> of January 2020 to the 24<sup>th</sup> of February 2020

### 2.1 Remarks on the price and cost of the service

Number	Stakeholder	Article	Feedback of Stakeholder
1	FEPEG	General remark and Annex 12	<p><b>Remuneration</b></p> <p>Following the changes proposed in 2018 regarding the ancillary service of reactive power, FEPEG expressed in a letter addressed on 10 December 2018 to FPS Economy its concerns regarding the remuneration of the ancillary service of reactive power (cfr attachment).</p> <p>FEPEG is concerned that the future remuneration would not cover all the costs: this means that power plants would be faced with additional costs and risks which would have a negative impact on their economic viability and on the investment climate in general. In this letter, FEPEG identified the following elements that should be taken into account for the remuneration:</p> <ul style="list-style-type: none"> <li>• the remuneration should cover at least the following components: industrial and operational risks, monitoring costs, training costs, administrative costs, commercial risk, maintenance costs, investment costs, ...;</li> <li>• remuneration must be sufficiently differentiated to take account of the type of technology and the age of the unit;</li> <li>• remuneration should vary according to a carefully calibrated reactive power band and according to injection or absorption;</li> <li>• the cost of a failure of a unit due to the mandatory provision of reactive power should be reimbursed;</li> <li>• both the provision of capacity and the supply of energy must be compensated.</li> </ul> <p>In this perspective, some of the proposed evolutions in the T&amp;C's raise concerns:</p> <p><b>Regarding the Fixed price term</b></p> <ul style="list-style-type: none"> <li>• We deplore that the possibility to include a fixed price in the offer of the service (as in the current contractual framework) has disappeared in the T&amp;C VSP. This fixed term is needed</li> </ul>

			<p>to cover the costs to provide the service under the conditions described in the contract, for instance IT communication investment.</p> <ul style="list-style-type: none"> <li>It is in contradiction with SOGL art 4.2 which stipulates the application of the proportionality principle : a party should not be imposed new costs if he is not certain to recover these costs. As the volume of MVAR activations is not known and highly uncertain, the variable remuneration does not give a guarantee to recover the investment costs.</li> </ul> <p><b>Regarding the Variable price term – price bands</b></p> <p>We do not see a factual argument to change the price bands from currently [0-50%] and [50%-100%] of the technical band in injection or absorption, to [0-90%] and [90%-100%] in a systematic way for all installations. The VSP is best suited to assess the best division of the price bands and should be able to propose in the tender where to set the split between the price bands (at 50%, 90% or any other value between 0 and 100%).</p>
2	RWEST	Annex 2 and Annex 12	<p>We are of the opinion that the technicalities included in Annex 2 and 12 do appropriately define the technical boundaries of the remuneration of the service. The draft T&amp;C VSP however lack any determination as to what a reasonable price may be and solely focus on variable costs. Further guidance as to the actual price components a provider of the service may reasonably be expected to price into would be appreciated.</p> <p>In this regard we would like repeat our comments made in our response to the Design Study that in general, a fair remuneration of investment, service and costs will be the best incentive for any generator to provide the maximum MVAR capacity to the Belgian market and support security of supply to the grid operator.</p> <p>RWEST is of the opinion that all reserved and activated MVAR shall be remunerated, regardless of whether the activation occurs automatically or manually. That is because leaving out the majority of the provided service from the remuneration would, firstly, let providers of these services recover only a fraction of the cost incurred and, secondly, give no incentive to generators to voluntarily provide MVAR to the system operator.</p> <p>In addition to a compensation based on variable prices, the provision of reactive power service requires significant investment which creates significant incremental fixed costs that providers of the service should be compensated for. Since these costs are no</p>

			<p>longer variable at the point in time when the power plant is dispatched, these costs should be reflected as a fixed price component and VSPs should reasonably be expected to include these fixed cost in their pricing structure.</p> <p>These fixed costs may include the additional cost for larger or more complex machinery, additional administrative costs, additional operating costs (including increased outage and related market risks), additional contract risks as well as a compensation for losses and maintenance related to wear and tear.</p> <p>We would further like to understand the reasons as to why Elia changed the price composition for Group 1 controlling units from currently 0-50% and 50-100% of the technical band in injection or absorption to 0-90% and 90-100% in one way for all Voltage Service Providers, not giving any due regard to the type of installation used to participate in the provision of Reactive Power. Could Elia please make transparent the factual arguments that form the basis of this change? Given that the cost for providing MVar increases with MVar produced, providing one price for 90% of the MVar produced is unreasonable for a majority of asset types. Instead of providing these price bands within the T&amp;C VSP it should be the VSP themselves that split between the most appropriate price bands in their tender according to their installations (which may be at 30%, 50%, 70% or any other value between 0 and 100%).</p>
3	BOP	II.8.3	<p>It was always the BOP's understanding that the remuneration for the service would consist of a fixed price component and a variable price component. The former would cover initial costs (including, but not limited to the IT investments required to offer the service) and be paid at the initiation of the contract, whereas the latter would cover the variable costs based on the quantity actually offered, paid on a monthly basis.</p> <p>The wording of this clause does however not seem to provide for a fixed price component.</p>
Answer of ELIA			
<p>Regarding the fixed price component, Elia refers to its <a href="#">design note</a> published in 2018 stating that fixed cost components such as investment, communication and metering costs constitute part of the provider's capability to provide Mvar and voltage control to Elia. As this capability is part of connection requirements fixed by the European and Belgian legal framework, it should hence not be remunerated. Any costs related to the service should be integrated in the variable cost component and justified in the offer.</p>			

Regarding the price bands, the adaptation proposed by Elia<sup>1</sup>, is based on the consideration that the cost of providing MVArS increases mainly when the Technical Unit is close to its technical limits as it could increase the risk of tripping, additional wear or additional active power losses and not as from the middle of the technical band. Based on Elia's design note from 2018 (section 7.6.2), defining a price band limit close to the technical limits should be the most relevant option.

However, Elia agrees that the band could depend on the considered Technical Unit and will allow some flexibility in the definition of the price band: Elia will allow the VSP to choose the limit of the price band (in MVAr) between 75% and 90% of the maximal reactive power in absorption/injection, upon justification of the band limit chosen by the VSP.

Elia reminds that the determination of a reasonable price for the voltage and reactive power control service is not part of the T&C VSP as this is a competence of the regulatory authority (i.e. the CREG).

Elia confirms that all activated MVArS will be remunerated independently on their production mode i.e. via an automatic regulation or via a manual activation.

#### Change in the T&C VSP?

Annex 12 has been modified to integrate more flexibility in the definition of the price bands

Number	Stakeholder	Article	Feedback of Stakeholder
4	BOP	II.8.1	<p>"Following article 12 quinquies of the Electricity Law of 29 April 1999, prices can be fixed by means of Royal Decree. In such an event, prices fixed by the Royal Decree become applicable and prevail over prices fixed according to Annex 12."</p> <p>BOP is concerned about the financial impact and general uncertainty this introduces. Windfarm will incur certain fixed costs, not in the least the IT set-up to be able to provide the requested service, and are not guaranteed that, once their offer is selected, these costs will be reimbursed. There is a risk that the imposed volume requires additional technical adaptations which might not be compensated by the fixed prices, as well as a risk that the fixed prices/volumes do not consider the circumstances and restrictions of offshore installations.</p> <p>Given the newly introduced mandatory participation to the VSP</p>

<sup>1</sup> consisting in allowing different prices for the segments for the [0-90%] and [90%-100%] of the technical band in injection or absorption instead of the segments [0-50%] and [50%-100%] of the technical band



			<p>services, it can be expected that the resulting tender prices will be competitive. There is thus no longer a need for such measure.</p> <p>BOP would like to request that either this principle is abandoned, through a change in the Electricity Law, or that the tenderer has the right to refuse offering the service in case the prices and/or volume fixed by the Royal Decree are unacceptable.</p>
<b>Answer of ELIA</b>			
<p>Elia takes due note of BOP's concerns but reminds that, by law, it is the CREG's role to assess the reasonability of costs based on the offers of the candidates. This procedure should allow for all reasonable costs, to be covered by the price.</p> <p>Regarding the change in the Electricity Law, Elia reminds that Elia has no competences to take the initiative for amendments in the Electricity law.</p>			
<b>Change in the T&amp;C VSP?</b>			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
5	BOP	II.8.4	<p>"The VSP shall hold a bilateral agreement with the Access Contract Holder, acknowledging and accepting the modalities of Service delivery and the interactions between the Service and the application of the tariffs as per modalities described in Elia's tariff proposal. In particular this bilateral agreement takes into account the fact that Qreq_rem will be also applied to calculate the tariff for the offtake or injection of additional reactive energy, as per modalities mentioned in Elia's tariff proposal."</p> <p>BOP understands that the impact of the service on the tariff for "power put at disposal for consumption" and "injection or absorption of additional reactive power" is subject of the bilateral agreement between the VSP and the Access Contract Holder. However the Elia's approved tariffs for 2020-2023 only provide for a correction for the "injection/absorption of additional reactive energy" and not the "power put at disposal" that might need to be adapted as a result of the VSP services. This creates a needlessly complex contractual relationship between the VSP and the Access Contract Holder, which could have easily been avoided by offered all the relevant corrections in the tariffs.</p>



			<p>The VSP and the ACH must now agree on if/when to increase the “power put at disposal”. Note that this can only happen once a year, and thus presents a substantial fixed cost for at least 12 months. In combination with art. II.8.1 that introduces legal uncertainty of whether the winning tender will receive its offered prices, and art. II.8.2 that does not seem to provide for a fixed component in the remuneration, BOP is of the opinion that Elia’s choice to not correct this in the tariffs, introduces unnecessary risks. In the future this should be adapted in the tariff structure.</p> <p>In the meantime, BOP proposes to make changes to the relevant contracts (e.g. the Access Contract) to increase the flexibility in the currently rigid regime. Furthermore, BOP asks a guarantee that the financial impact of the mandatory VSP services will be mitigated under all circumstances, also when a RD applies.</p>
Answer of ELIA			
<p>Elia understands BOP’s concerns regarding the increase of supported costs due to an increase of the access tariff component Power Put at Disposal (PPAD) caused by the participation to the voltage and reactive power control service. As an increase of PPAD is a direct consequence of activations of the voltage and reactive power control service in compensator mode, and as the costs related to this tariff increase are easily demonstrable, Elia agrees to add a specific cost component in the remuneration to cover the additional costs related to a PPAD increase. The VSP should then clearly indicate in its offer the costs related to the increase of PPAD that he has to support due to the delivery of the service.</p>			
Change in the T&C VSP?			
<p>A new article has been added in the contract: Art. II.8.5 allows the VSP to request a separate compensation of the costs related to an increase of the PPAD.</p>			

## 2.2 Remarks on the participation to the service

Number	Stakeholder	Article	Feedback of Stakeholder
6	FEBEG	General remark	<p>Newly obliged units : need for a transition period</p> <ul style="list-style-type: none"> <li>- We deplore that the transition period for newly obliged units (i.e. existing units that weren’t offering the service until now but for which the service becomes mandatory) foreseen in the Design Note (art. 10.3) is not taken over in the T&amp;C VSP.</li> </ul> <p>Elia has given the impression in the Design Note that no action was needed before the entry into force of the new rules (now foreseen on 01/01/2021):</p>

			<p>o 10.3 §3 "...Elia proposes to allow a transition period of 6 months after entry into force of the service's new design to perform these studies"</p> <p>o 10.3 §4 "Similarly, after completing the above evaluation some of the above units will need to implement IT communication and prepare technically for providing the service. Elia proposes a lead time of 1 year to perform all above changes".</p> <ul style="list-style-type: none"> <li>- Specifically for local production units, the impact of the MVAR service on the internal local grid must be analyzed, and a stop of the must run unit must be planned for implementation and testing. A transition period of 1,5 year is absolutely necessary.</li> <li>- Allowing a transition period for those units is not in contradiction to the provisions of the Federal Grid Code, according to which the grid user is obliged to participate to the service "at request of the TSO".</li> <li>- As the contracting of the service takes place through a tendering process, the bidder is not certain that his offer will be retained. It cannot be imposed to a party to make investments to deliver a service before he receives confirmation that he is contracted for that service.</li> </ul>
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#### Answer of ELIA

First of all Elia wants to remark that specifications relative to the (mandatory or voluntary) participation of the service are described in the Federal Grid Code, and not in the VSP contract, therefore the FEBEG's remark is *stricto sensu* out of scope of the document publically consulted "VSP contract".

Regarding the current regulatory framework, Elia does not share FEBEG interpretation of the Federal Grid Code as the mention of a participation to the service "at request of the TSO" does not allow Elia to only select the units obliged to provide the service when they are ready to provide. According to Elia's reading of the Federal Grid Code and General Requirements<sup>2</sup>, as there are no articles indicating explicitly the possibility of a transition period for the units obliged to provide the service the article 234 is of immediate application for the 1st coming call for tender.

Elia also reminds that the new Federal Grid Code entered into force on the 22th of April 2019 while the T&C VSP will enter into force from the 1st of January 2021. A period of 1.5 year will then already take place between the entry into force of the obligation to provide the service and its actual application.

Concerning the units that are obliged to provide the service according to the legal framework, Elia foresees the following actions:

- proactively contact and inform all Grid Users concerned by a mandatory participation of one of

<sup>2</sup> Application for new assets connected to the regional level of Elia's grid

<p>their unit(s) and</p> <ul style="list-style-type: none"> <li>- provide a report to the CREG relative to the all units concerned by this obligation.</li> </ul>
Change in the T&C VSP?
No

Number	Stakeholder	Article	Feedback of Stakeholder
7	BOP	General remark	<p>It is unclear to BOP to what extent and in which situations its members are obligated to offer voltage control services. Relevant parameters can be found in the Federal Grid Code (art. 65), and in the individual members' original detail studies and Access Contracts. Article II.4.3 (and Annex 1) of the T&amp;Cs allow the VSP to indicate its technical control band in both injection mode and compensator mode.</p> <p>However Elia has communicated to the BOP that its members are not obliged to offer voltage services when the windfarm is in compensator mode. BOP fully agrees on this. Could Elia please guide us to the legal substantiation. Could Elia please also confirm BOP's understanding that its members will be free to define their technical control band, as part of the tender procedure.</p>
Answer of ELIA			
<p>Elia refers to the Federal Grid Code for a description of the obligation in terms of voltage and reactive power regulation. The relevant articles for new offshore wind parks and existing offshore wind parks (that should be considered as existing generator of type C/D) are described in the <a href="#">explanatory note</a> that was provided during the public consultation.</p> <p>Elia wants to clarify that the minimum capability (corresponding to the technical control band) for voltage and reactive power regulation is defined in the Federal Grid Code and that, in accordance with the legal framework, any grid user has to offer to Elia his entire capability (meaning the entire control band that is technically possible). The technical control band put at Elia's disposal cannot be freely chosen by the VSP as it will result from an assessment that will be performed by Elia and the VSP during the prequalification.</p>			
Change in the T&C VSP?			
No			

## 2.3 Other remarks

### 2.3.1 FEBEG

Number	Stakeholder	Article	Feedback of Stakeholder
8	FEBEG	II.3.3	<p>Prequalification</p> <p>- According to Art. II.3.2(f) and Annex 13, the Prequalification procedure should be performed before delivery of the service. In the WG Belgian Grid of 04/02/2020, Elia announced that it should be performed before the submission of bids in the tendering process. Can Elia clarify the timing of the prequalification procedure? As explained above, for local production units a detailed analysis of the impact of the MVAR Service on the internal grid is needed (besides the analysis of the impact of the local grid topology on the MVAR Service). From a practical point of view, such studies can't be performed before the tendering foreseen in June 2020.</p>
Answer of ELIA			
<p>The prequalification phase has to occur during the call for candidates and call for tender as the parameters related to the service (e.g. sensitivity coefficient) have to be specified in the VSP's offer. However only the prequalification test can be performed after the tender but before delivery of the service. VSP's can of course contact Elia before the call for candidate to organize some prequalification test and/or discuss the parameters. The service parameters can still be adapted until signature of the contract if the VSP provides a technical justification (e.g. internal grid study) and with the agreement of Elia.</p> <p>Elia also reminds that the delivery of the service and the remuneration of the service will only start after the conditions set in Art. II.3 are satisfied and this independently of the voluntary or mandatory participation to the service. This has been clarified in Art. II.8</p>			
Change in the T&C VSP?			
<p>The article II.3.7 e) has been adapted to clarify the possible updates of the sensitivity coefficient by the VSP. An article has been added in Art. II.8 to make a clear link between the start of the remuneration and the conditions set in Art. II.3.</p>			

Number	Stakeholder	Article	Feedback of Stakeholder
9	FEBEG	II.8.4	<p>Agreement VSP – Access Contract Holder (art II.8.3)</p> <p>In case the owner of the obliged technical unit and the grid user and /or access holder are different parties, the owner cannot be held responsible in case no agreement can be reached with the access holder due to unacceptable demands of the access holder/grid user, or due to contradiction with the existing contractual relationships.</p>

## Answer of ELIA

As described in the [tariffs applicable for the period 2020-2023](#), in case of activation by Elia of (automatic or manual) voltage control, a correction is performed on the value of the quarter-hourly reactive power at the corresponding access point or interconnection point, on the basis of the volume requested by Elia. In this context, as any activation can have an impact on the access tariff, art. II.8.4 of the VSP contract stipulates that the VSP shall have bilateral agreement with the ACH acknowledging and accepting the interactions between the MVAR service and the application of the access tariffs as per modalities described in Elia's tariff proposal.

This agreement is a necessary condition for the conclusion of the VSP contract with Elia.

This is without prejudice to the obligation for the Grid User (who designates the ACH on one hand and the VSP on the other hand) to designate a VSP or become VSP for the provision of the Service.

Besides that, Elia also wishes to mention that she is currently analyzing more in details the impact in terms of obligation related to a.o. the provision of the voltage control service for the particular case the Grid User and the Asset Owner are different parties.

## Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
10	FEBEG	Annex 5	<p>Annex 5. Example of calculation of the relative sensitivity coefficient (Alpha_eq)</p> <ul style="list-style-type: none"> <li>- Alpha_eq is not a constant value : it is dependent on the grid voltage and on the reactive power production level. Assuming a constant value will induce errors in the determination of the required MVAR volume.</li> <li>- As mentioned in the disclaimer in annex 5, the presented method to determine the Alpha_eq should be considered only as example. The Alpha_eq should be determined by the VSP after discussion with Elia and with the cooperation of Elia to perform new tests or to made historical measurements data available.</li> </ul>

## Answer of ELIA

In case the automatic service is provided, the alpha\_eq defines the linear relation between the voltage at the service measurement point and the reactive power absorbed or injected by the Technical Unit. As the automatic service aims to control the voltage at the service measurement point, this coefficient should be constant as it should be a parameter of the voltage controller of the technical unit.

Indeed the method presented in annex 5 is only an example for informative reasons. A discussion will be initiated between the VSP and Elia to determine the sensitivity coefficient based on available data (technical information, historical data etc). Elia reminds that, although the sensitivity coefficient is indeed determined based on discussions between the VSP and Elia, it is finally fixed by Elia following the results of this discussion so that Elia can challenge the value proposed by the VSP.

## Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
11	FEBEG	Annex 2/3/8	<p>Remuneration mechanism and Control</p> <p>- A correct determination of the required MVAR volume is uttermost important as it determines the remuneration (Qreq_rem), the activation control (Qreq_control) and also the correction to be applied to the tariff for offtake or injection of additional reactive energy. The method for this determination is not well explained in the T&amp;C VSP, as shown below :</p> <p>Annex 2. Calculation of Remuneration of the Service</p> <ul style="list-style-type: none"> <li>In the formula on page 2 : “<math>\Delta Q_{req}</math>: the last Setpoint change value communicated by Elia as per Annex 8”. Elia communicates a Setpoint value, not a <math>\Delta Q_{req}</math>. (cfr below)</li> <li>On p.3, Qh 3 : « <math>\Delta Q_{req} = \text{Setpoint 2} - \text{Setpoint 0}</math> » How are Setpoint 2 and Setpoint 0 determined ? These are not Setpoint values previously sent by Elia...</li> </ul> <p>Annex 3. Delivery Control of the Automatic control service type</p> <ul style="list-style-type: none"> <li>The formula for Qreq_control should also contain a term for the setpoint changes.</li> </ul> <p>Annex 8. Communication of a Setpoint by Elia for manual control</p> <p>Figure 4 : the “<math>\Delta Q_{req}</math>” is annotated as “Adjustment value communicated by Elia”. Elia communicates the Setpoint value, not the <math>\Delta Q_{req}</math>.</p> <ul style="list-style-type: none"> <li>It is not clear how the <math>\Delta Q_{req}</math> is determined in practice: by calculation based on the voltage and the preceding setpoint, or based on the reactive power measurement at the time of the request or at the time that the VSP addresses Elia’s request...</li> <li>At the end, the determination of <math>\Delta Q_{req}</math> should be such that the required MVAR volume is recalibrated to reflect the real conditions (U,Q) when the Setpoint is reached.</li> </ul> <p>The variations of active power production of the power plant should also be taken into account in the determination of required MVAR, as</p>

			<p>it influences the reactive power consumption of the transfo.</p> <p>We are open to cooperate with Elia in order to try to determine a correct method for the determination of the required MVAR.</p>
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#### Answer of ELIA

Elia agrees with FEBEG that the determination of the required reactive power is very important for all the aspects related to the service. Elia will then clarify some elements in the mentioned annexes:

- Annex 2 has been adapted to clearly define that the required reactive power is recalibrated at the quarter-hour following a manual setpoint change to reflect the real conditions of reactive power and voltage when the setpoint is reached in order to avoid a propagation of error in case there is a voltage variation while the VSP changes its setpoint. The recalibration will be performed using the measured reactive power and voltage at the quarter-hour following the setpoint request. For clarification reason, a new term “Qinitial” has been added and defined in the annex 2.
- Annex 3: indeed Qreq control also integrates a term for setpoint changes but which is considered equal to 0 in the example of this annex. This has been explicitly mentioned in the annex 3.
- Annex 8: The figure 4 has been corrected in Annex 8

Concerning the consideration of the active power production of the technical unit and its influence on the reactive power consumption of the transformer, Elia reminds that the service should be provided at the service measurement point which is by default the access point (except for particular cases as described in articles II.3.4 a)). As the access point is located on the high voltage side of the step-up transformer, the active power flow in the transformer and the related reactive power consumption should be considered in the voltage and reactive power regulation of the technical unit. By consequence, Elia will not consider the grid elements behind the service measurement point to compute the required reactive power.

#### Change in the T&C VSP?

The annex 2, the formula in annex 3 and the figure in annex 8 have been adapted.

Number	Stakeholder	Article	Feedback of Stakeholder
12	FEBEG	Annex 6	We express our reserves with respect to the penalties related to the automatic control service type (Annex 6) as the total error on the determination of the required MVAR volume (Qreq_control) (due to the alpha-eq, the determination of $\Delta Q_{req}$ , the variations of active power production,...) and the error due to the precision of the measurements may leave not enough margin in the tolerance band for normal regulation discrepancies. The tolerance band should be fully available to absorb the normal regulation discrepancies.

#### Answer of ELIA

Considering the 10<sup>th</sup> and 11<sup>th</sup> answers in this consultation report, Elia wants to remind that:



- the alpha-eq will be defined carefully after discussion between Elia and the VSP and when possible based on historical data
- The required reactive power will be recalibrated as described in the 11th answer in this consultation report in order to avoid error propagation
- The variations of active power should be considered in the VSP's voltage and reactive power regulation

Consequently, Elia estimates that the tolerance band is sufficient to cover normal regulation discrepancies.

### Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
13	FEPEG	Annex 6	Annex 4. Delivery Control of the manual control service type. "To verify whether the required Reactive Power was supplied (Qreq_control ), Elia uses the remote 30" Reactive Power and Grid Voltage measurements... " It is not clear how the grid voltage measurements are used for this verification. Only the Reactive Power measurements are necessary according to the example.

### Answer of ELIA

Elia has adapted the text as indeed only the 30" reactive power measurements are necessary for the delivery control of the manual control.

### Change in the T&C VSP?

Annex 4 has been adapted.

## 2.3.2 FEBELIEC

Number	Stakeholder	Article	Feedback of Stakeholder
14	FEBELIEC	General remark	Febeliec wants to stress that for existing technical units with a mandatory participation, the new framework for voltage service should in no case lead to obligatory retrofits and only be related to existing capabilities. It is also important to stress that as described for certain categories of technical units, as in particular demand facilities, participation remains voluntary. Moreover, in case the framework for voltage service would change in the future (e.g. more stringent requirements or new contractual obligations) or their own capabilities would change, these voluntary participants must be

			allowed at each moment in time to withdraw their participation to the service.
Answer of ELIA			
<p>Elia reminds that the conditions for mandatory participation and minimum capabilities (technical requirements) to provide the voltage service for existing and new units are described in the Federal Grid Code and are out of scope of the consulted document "VSP contract".</p> <p>Besides that, a general exit clause is foreseen in the general conditions of the contract that voluntary participants to the service could invoke to withdraw their participation to the service in case they do not agree with eventual amendments that would be applicable to the VSP contract during the contractual period. In case of changes in the legal/regulatory framework, the necessary adaptations to the contractual framework will be made following the relevant procedure.</p>			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
15	FEBELIEC	General remark	With respect to closed distribution systems, Febeliec asks Elia to clarify in the text when all CDSs are concerned (federal grid, local transport grid and distribution grid) and when only one or two of these categories are concerned, amongst other because of lacking or diverging regional and/or federal legislation. In any case, Febeliec wants 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 any case with respect to those CDSs connected to the federal grid (while being unclear with respect to those connected to the local transport grid and even more so with respect to those connected to the distribution grid, where presumably the public DSO to which they are connected will take up the role of VSP towards Elia, but where it remains unclear which role the CDSO would have to perform towards the public DSO).
Answer of ELIA			
<p>Elia wants first to highlight that the participation of CDSO is voluntary independently of their connection to the federal, regional or distribution grid. In the context of this contract, Elia only refers to CDS connected to the Elia grid (federal grid or regional grid) as mentioned in the definition. In case a grid user connected to a CDSO which is itself connected to a public DSO wants to voluntarily participate to the service, the public DSO will have to be the VSP i.e. the party providing the service to Elia.</p>			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
16	FEBELIEC	General remark	The consultation is conducted only in English, but in legal terms only the Dutch and French versions are relevant (e.g. p33/34 of the T&C VSP). Febeliec thus explicitly reserves itself the right to formulate comments on the future Dutch and French texts.
Answer of ELIA			
Elia re-opened the public consultation on the T&C VSP for two additional weeks and provided on top of the English version of the T&C VSP, the French and Dutch translations. This reopening of the consultation allowed market parties to verify and confirm or complete their first remarks already provided to Elia based on the French and Dutch versions of the T&C VSP.			
Change in the T&C VSP?			
Not consequently to this remark, but additional eventual remarks received during the additional two weeks of consultation may lead to adaptations (as detailed in section 3 of this consultation report).			

Number	Stakeholder	Article	Feedback of Stakeholder
17	FEBELIEC	General remark	The proposed texts in many instances do not take sufficiently into account the situation in which the MVAr service is delivered by a CDSO as VSP (see below for a non-exhaustive list of textual examples)
Answer of ELIA			
Elia has clarified where necessary concerned sections of the contract following Febeliec's comment mentioned in this consultation report.			
Change in the T&C VSP?			
Yes (as described in answers to questions 31 and 33 in this consultation report)			

Number	Stakeholder	Article	Feedback of Stakeholder
18	FEBELIEC	General remark	Despite comments during the study-phase in the course of 2018, Febeliec still has to observe that still the texts seems to consider that the voltage service will be provided by generation assets, thus not paying sufficiently attention to other sources, such as for example capacitor banks, that can also fulfil the service requirements. (see below for a non-exhaustive list of textual examples)
Answer of ELIA			

Elia first confirms that the new design allows the participation to the service of all type of assets (including capacitor banks). Elia also reminds that although the contract is open to all technologies it has to take into account some specificities linked to each technology. Elia has adapted the wording of the contract when it is not sufficiently technology neutral (see answers to specific points in this consultation report) and or made it more clear when targeting one specific kind of technology.

Change in the T&C VSP?

Yes (as described in answers to questions 35 to 37 in this consultation report)

Number	Stakeholder	Article	Feedback of Stakeholder
19	FEBELIEC	Main body	Twice the text still refers to Elia System Operator instead of Elia transmission Belgium

Answer of ELIA

Elia has corrected this in the T&C VSP body.

Change in the T&C VSP?

Change in the T&C VSP body

Number	Stakeholder	Article	Feedback of Stakeholder
20	FEBELIEC	Main body	Febeliec wants to reiterate its comment with respect to the use of English, which can be satisfactory during an information and potentially consultation phase, but where a French and Dutch version is required to make sure that all nuances have been correctly taken into account.

Answer of ELIA

Elia refers to the 16<sup>th</sup> answer in this consultation report.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
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21	FEBELIEC	General Conditions	The general conditions were consulted upon in 2019 in Dutch/French, whereas now they are consulted upon in English, which does facilitate the revision.
Answer of ELIA			
Elia wants first to remind that the general conditions were already consulted and that the final version was included in the T&C VSP so that they contain no new elements for Market Parties. Elia then refers to the 16 <sup>th</sup> answer in this consultation report concerning the consultation languages.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
22	FEBELIEC	General Conditions	Most comments formulated by Febeliec in 2019 seem to have been implemented by Elia, but the general comment on the lack of clarity regarding definitions and the force majeure clause comment, for example, have not been accepted. Nevertheless, a clear set of definitions is an absolute necessity to avoid discussions about the interpretation of contractual clauses. With regard to the force majeure clause, and in particular the list of situations mentioned in Article I.7.3 (albeit with reference to the restrictive conditions in the second paragraph of Article I.7.3), Febeliec notes that these are mainly written from Elia's perspective. For example, the fourth item of the list should also be made reciprocal, since such a major situation could also occur within the network of a CDSO (which would certainly be relevant in the context of for example the MVAr service).
Answer of ELIA			
<p>With respect to the definitions, Elia reminds Febeliec that references to the legal framework aim at definitions that do not need specifications in the context of these contracts. Definitions that apply to this contract and need specifications are listed in the document to avoid any contradiction with existing legislation. Also in the specific conditions, definitions are listed. Following the remarks of Febeliec regarding 'directe schade' and 'indirecte schade', those definitions have been adapted.</p> <p>With respect to force majeure: Elia reminds that this list of situations is not limitative and any situation will only be considered as force majeure if it complies with the legal framework. A reciprocal situation is in principle not excluded as potential situation of force majeure. Nevertheless, Elia takes due note of the comment of Febeliec regarding the formulation of the Article I.7.3. As the General Conditions were the subject of a separate public consultation (given their application to all Terms and Conditions proposed by Elia) and this comment is applicable to the General conditions for all terms and conditions, and not specifically for the T&amp;C VSP, Elia will take this comment into consideration for the revision of the General Conditions.</p>			

Change in the T&C VSP?			
No			
Number	Stakeholder	Article	Feedback of Stakeholder
23	FEBELIEC	Definitions	Febeliec wants to reiterate the same general remark about definitions as already stated by Febeliec with regard to the definitions in the General Conditions
Answer of ELIA			
<p>Elia reminds Febeliec that references to the legal framework aims at definitions that do not need specifications in the context of these contracts.</p> <p>Definitions that apply to this contract and need specifications are listed in the document to avoid any contradiction with existing legislation.</p>			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
24	FEBELIEC	Definitions	Access Point: it is not clear why this definition refers to other networks if it is stated at the end of the definition that i.c. the definition will only relate to an Access Point to the Elia network
Answer of ELIA			
<p>The initially proposed definition of Access point was aiming at being aligned/harmonized with general definition of an Access Point described in other T&amp;C's before specifying the use of this term in the context of this contract.</p> <p>Elia understands from Febeliec's comment that this on the contrary creates confusion. Therefore, Elia has adapted the definition in order to limit it only to the Access points to the Elia grid.</p>			
Change in the T&C VSP?			
The definition has been adapted			

Number	Stakeholder	Article	Feedback of Stakeholder
25	FEBELIEC	Definitions	CDS and Elia Grid: on the basis of these two definitions, Febeliec understands that this T&C VSP only relates to the CDSs connected to the federal transmission network or to the local transmission networks (such as the local transport network

			in Flanders or the Walloon Region), but not to the CDS connected to a public distribution network.
Answer of ELIA			
Any CDS connected to a public distribution grid is also free to participate to the service but, as the service to Elia needs to be provided by the DSO, the VSP has to be the DSO and the service needs to be provided at the interconnection point between the DS grid and Elia grid.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
26	FEBELIEC	Definitions	Grid User: if Febeliec understands this definition correctly, this includes both the network users (as defined in the Federal Grid Code) and the CDS users (as defined in the Federal Grid Code). As a result, when the term Grid User is used in this T&C VSP, it is often guessing whether the CDSO or the CDS user is meant. It is strongly recommended to define both terms separately.
Answer of ELIA			
Elia agrees with Febeliec's comment and performed a screening of the contract to identify and verify that there is no ambiguity each time the term Grid User is used. In the framework of this VSP contract, the term Grid User makes nearly always reference to the <b>Elia</b> Grid User (including the CDSO) who is requested to designate a VSP or act a VSP. Therefore, Elia has clarified the definition of Grid User (to refer to Elia Grid user) and has defined the terms "Elia Grid User" "CDS User" and "Public Distribution Grid User" for clarity. When the term Grid User is used, it refers to the Grid User of the Elia grid, otherwise the term CDS User or Public Distribution Grid User are used.			
Change in the T&C VSP?			
The definition of Grid User has been modified and the definitions of "Elia Grid User" CDS User" and "Public Distribution Grid User" have been added.			

Number	Stakeholder	Article	Feedback of Stakeholder
27	FEBELIEC	Definitions	Grid Voltage: this term is defined (and depends on the definition of Service Measurement Point), but in the text (e.g. definition of Manual Control Service Type) sometimes "Elia Grid Voltage" is used and this term is not defined ...
Answer of ELIA			
Elia has corrected the use of this term in the contract			



### Change in the T&C VSP?

The use of the term “Grid Voltage” has been harmonized in the entire contract

Number	Stakeholder	Article	Feedback of Stakeholder
28	FEBELIEC	Definitions	Power Measured: in this definition reference is made to the term “Delivery Point” but there is no specific definition for this in the T&C VSP, so the question arises as to how exactly this term should be interpreted (which definition in the Federal Grid Code or in European regulation applies here?) - this is illustrative of our general comment on definitions that Febeliec already made regarding the General Conditions

### Answer of ELIA

Elia has corrected the definition of Power measured by replacing “Delivery Point” by “Service Measurement Point” which is well defined in the VSP contract.

### Change in the T&C VSP?

The definition of “Power measured” has been modified.

Number	Stakeholder	Article	Feedback of Stakeholder
29	FEBELIEC	Definitions	Service Measurement Point: the definition raises some questions and must be discussed in any case, certainly in a CDS context, in conjunction with Article II.3.3 a)

### Answer of ELIA

The Service Measurement Point is the reference point for the delivery, remuneration and delivery control of the service. This point is determined during the prequalification phase.

### Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
30	FEBELIEC	Definitions	Technical Unit: it is not clear to Febeliec what exactly Elia means by a “facility connected within the LFC Block of Elia”. However, it is crucial that there can be no confusion as to which assets a Technical Unit can / will constitute in the light of this T&C VSP (e.g. capacitor banks)

### Answer of ELIA

Elia has adapted the definition to avoid any confusion. Elia reminds that the participation to the service is open to all Technical Units connected to Elia-grid, to a Public Distribution grid or to a CDS.

### Change in the T&C VSP?

The definition has been adapted

Number	Stakeholder	Article	Feedback of Stakeholder
31	FEBELIEC	II.2.1	The contract assumes that if the VSP is not itself the Grid User who operates the Technical Units, then the VSP must be designated by the Grid User via Annex 11. But we assume that the signing of Annex 11 is not required on a CDS, where based on the contract itself (art. II.3.3, c) the CDSO is by definition the VSP, without having to be designated by the CDS-user (Grid User)?

### Answer of ELIA

Indeed 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. The art II.2.4 has been adapted to reflect this point.

### Change in the T&C VSP?

The art II.2.4 ) has been adapted

Number	Stakeholder	Article	Feedback of Stakeholder
32	FEBELIEC	II.2.6	Open Prequalification Procedure (in the definition list an Open Qualification Procedure instead of the Open Prequalification Procedure): In order to qualify as a VSP, a sworn statement must be issued and proof of financial solvency must be submitted. Does this also apply to the CDSO as a VSP?

### Answer of ELIA

Indeed any VSP that wants or is obliged to participate has to submit an offer following the open qualification procedure which is based on EU legislation relative to tendering procedures. The title of art II.3.1 has been corrected as "Open Qualification Procedure" is the correct terminology.

### Change in the T&C VSP?

The title of art II.2.6 has been corrected

Number	Stakeholder	Article	Feedback of Stakeholder
33	FEBELIEC	II.3.3 a)	The Technical Requirements (and more specifically the "relative sensitivity coefficient alpha") refer to certain criteria that are defined for this purpose in the "Connection Contract for the Technical Unit". But there is no connection contract for the Technical Unit, there is for the CDS.

### Answer of ELIA

Indeed the technical characteristics of PPM/PGM's are listed in annex 1 of the connection contract signed between Elia and the Grid User of the Elia grid for the connection of the entire industrial site or CDS of the Grid User. The sentence has been rephrased.

### Change in the T&C VSP?

Article II.3.3 a) has been rephrased

Number	Stakeholder	Article	Feedback of Stakeholder
34	FEBELIEC	II.3.3	This provision is unclear, as there appears to be a suspension prior to the execution of the Communication Test, but also a suspension of the compensation after the failure of the Communication Test?

### Answer of ELIA

Indeed if Elia notices an issue with the communication means of the VSP, the VSP is required to perform a new test and its remuneration is suspended until this new test is performed. If this new test is not successful, the VSP is considered as not compliant with the communication requirements and is excluded from the service (with a suspension of the remuneration) until he is able again to succeed a new test.

### Change in the T&C VSP?

The article II.3.3 d) has been clarified

Number	Stakeholder	Article	Feedback of Stakeholder
35	FEBELIEC	II.3.4 b)	General: Febeliec remains with many questions about this section of the T&C VSP and would like to discuss this in more detail with Elia - What exactly does Elia mean by "is not influenced in an unpredictable way" and what exactly does Elia want to achieve with this?

			<ul style="list-style-type: none"> <li>- “Active Power measurements for each Technical Unit” - is a separate measurement meant for each Technical Unit / required by Elia? However, frequency inverters, for example, are never measured separately. Moreover, during the WG Belgian Grid, Elia (Mrs. Tsiokanos) explicitly confirmed that the Technical Units do not require a separate measurement. This passage is probably written with only (large) generators in mind, without also taking into account, for example, frequency converters or capacitor banks</li> <li>- The last bullet, which refers to the BRP of all Technical Units, raises a lot of eyebrows in our eyes, because the BRP has, among other things, no role to play in this. After all, the MVar service is not provided by the BRP but by the Technical Units. A capacitor bank does not even have a BRP ... It seems to be forgotten here that it is about reactive energy instead of active energy.</li> </ul>
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#### Answer of ELIA

In order to provide the service with multiple Technical Units on the same Service Measurement Point, Elia must be sure that the delivery of the service will not be influenced by local grid elements located behind the Service Measurement Point as described in the Annex 13 of the contract.

To allow cumulated measures for several Technical Units **generating active power** at a certain Measurement Point, Elia needs to know the active power level of each Technical Unit as it defines the amount of reactive power that can be provided at this Service Measurement Point as per articles II.4.1 and II.5.1. In case of Technical Units that are not PGM's or PPM's (such as capacitor banks), these measurements do not have to be provided. The formulation of the two last bullet points of this article has been adapted to precise which conditions are applicable per type of Technical Unit.

Regarding the last bullet of Febeliec's comment, Elia refers to her answer in question 36.

Finally, Elia confirms, as already expressed during the WG Belgian Grid Febeliec is referring, that Elia is at stakeholder's disposal for any specific additional clarification and discussion regarding the participation to that service.

#### Change in the T&C VSP?

The article II.3.4 b) has been adapted

Number	Stakeholder	Article	Feedback of Stakeholder
36	FEBELIEC	II.3.4 e)	Just like with the last bullet of Art. II.3.3, b Febeliec completely misses the meaning of this passage, certainly in a CDS context. For example, there is not even a BRP contract for a capacitor bank.

#### Answer of ELIA

The objective of this article is to ensure that any Technical Units providing the service comply with all administrative conditions applicable for any asset connected to the Belgian electricity grid independently from the ancillary services it provides.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
37	FEBELIEC	II.3.7	Also this passage (and in particular the reference to the Elia Grid) does not make any sense for a CDS, because if Febeliec reads this passage literally, e.g. a large generator that is not directly connected to the Elia grid but to a CDS grid would not be able to participate in the MVar service. In addition, this would also exclude capacitor banks from participating in the MVar service, because capacitor banks do not inject or purchase Active Power (a capacitor bank is not considered a "load")

Answer of ELIA

Elia has deleted this article to avoid excluding any type of Technical Unit

Change in the T&C VSP?

The referred article has been deleted

Number	Stakeholder	Article	Feedback of Stakeholder
38	FEBELIEC	II.4/II.5	In contrast to, for example, art. II.7, there is no clear structure in this article, as a result of which it is currently unclear which clauses apply precisely to which type of Technical Units.

Answer of ELIA

The structure of the VSP contract has been improved in order to improve the clarity.

Change in the T&C VSP?

Clarification of the T&C VSP structure by adding titles and by improving the split of articles.

Number	Stakeholder	Article	Feedback of Stakeholder
39	FEBELIEC	II.6.2	We assume that, in accordance with the Federal Grid Code, the measurement on a CDS is in principle always done by the CDSO (also in the context of the MVAr service). However, this is currently insufficiently apparent from the text.
Answer of ELIA			
Elia confirms this is exactly what the article means. A clarification has been added in footnote concerning the origin of the metering data.			
Change in the T&C VSP?			
A footnote has been added to clarify this article			

Number	Stakeholder	Article	Feedback of Stakeholder
40	FEBELIEC	II.7	The concrete interpretation of the texts in the boxes still needs to be discussed in detail between Elia and the CDS operators
Answer of ELIA			
Elia reminds that the localization of the delivery control is part of the discussion concerning the determination of the Service Measurement Point that are part of the prequalification phase as described in the Annex 13 of the contract.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
41	FEBELIEC	Annex	Febeliec notes that in the Annexes definitions are not always used correctly (eg Annex 2: requested Reactive Power instead of Reactive Power Required, etc.)
Answer of ELIA			
Elia has harmonized the terminology in the annexes and in particular in Annex 2			
Change in the T&C VSP?			
An Harmonization of terminology in the annexes has been performed. Two definitions have also been added for clarity: "Sensitivity Coefficient" and "Minimum Active Power Threshold"			

Number	Stakeholder	Article	Feedback of Stakeholder
42	FEBELIEC	Annex 11	As mentioned earlier, 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
<b>Answer of ELIA</b>			
Elia refers to the 31 <sup>st</sup> answer in this consultation report.			
<b>Change in the T&amp;C VSP?</b>			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
43	FEBELIEC	Annex 11	<ul style="list-style-type: none"> <li>- How does this “Prequalification Procedure” relate to the so-called Open Qualification Procedure (Art. II.3)?</li> <li>- The term "Technical Band" is not defined</li> </ul>
<b>Answer of ELIA</b>			
<p>The “Open Qualification procedure” is a necessary step to apply as VSP while the prequalification is a condition for a Technical Unit to be allowed to provide the service. The structure of the T&amp;C has been clarified to separate the conditions to become a VSP and the conditions for Technical Units.</p> <p>As the term “Technical Control Band” is well defined in the contract, the wording has been harmonized in the entire contract.</p>			
<b>Change in the T&amp;C VSP?</b>			
<p>The structure of the contract has been clarified to clearly separate the conditions to become a VSP and the conditions for Technical Units (adding the title 2 and creating two separate articles II.2 and II.3).</p> <p>The use of the term “Technical Control band” has been harmonized in the contract.</p>			

### 2.3.3 Belgian Offshore Platform

Number	Stakeholder	Article	Feedback of Stakeholder
44	BOP	II.3.4 a-b) + Annex 13	Positive and important that the Service Measurement Point may also be a point located downstream from the Access Point.



Answer of ELIA
Elia thanks BOP for the supporting comment on this point.
Change in the T&C VSP?
No

Number	Stakeholder	Article	Feedback of Stakeholder
45	BOP	II.2.4	15 working days is too short to make corrections. Please increase to 45 working days to allow for technical modifications to take place. Especially for offshore modifications, amongst other reasons, weather downtime has to be taken into account.
Answer of ELIA			
Elia wants to precise that the article II.2.4 is related to the conditions to become a VSP set in the Open Qualification Procedure. The conditions mentioned in this article are then only financial and legal and do not concern any technical requirements. The 15 working days to make correction are then not related to technical modifications, as this is not required in this context. Elia thinks that 15 working days is sufficient to make correction in the context of the conditions set in the Open Qualification Procedure.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
46	BOP	II.3.4	<p>Within the black box: “Elia requires a service to be delivered at the high voltage side of the step-up transformer associated to the access point of a grid user to the Elia Grid or the Interconnection Point of the DSO.”</p> <p>The step-up transformer is offshore connected by a submarine export cable which means the only reference for an offshore windfarm can be the connection point at the Elia side of the export cable (onshore or offshore).</p>
Answer of ELIA			
Elia reminds that the reference measurement point for the service is the Service Measurement Point as defined in art. II.3.4 and determined during the prequalification as described in Annex 13. For clarity, Elia has removed the references to the step-up transformer			

### Change in the T&C VSP?

The References to the step-up transformer have been removed in the contract (art. II.3.4 a and b and art. II.7.1)

Number	Stakeholder	Article	Feedback of Stakeholder
47	BOP	II.5.6 and Annex 3	<p>If a manual setpoint is reached, does Elia check whether the volume of the Qreq_control, as measured at the Service Measurement Point, is within the limits of the tolerance (as described in Annex 3), for at least two successive 30 second measurements?</p> <p>To ensure that Elia can verify if the volume of the Qreq_control is within the limits of the tolerances (i.e. to avoid the reactive power exchange to change due to a changing grid voltage during the verification period), a manual setpoint needs to be maintained for 1 min 30 seconds before re-activating the automatic voltage control.</p>

### Answer of ELIA

Indeed Elia confirms that the delivery control for the manual service checks if the setpoint is reached (within tolerance band) for at least two successive 30s measurements in the 5 min following the request. The approach proposed by BOP is then in line with the manual service requirement.

### Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
48	BOP	II.5.8 and Annex 2	<p>For PPMs that can seamlessly operate between Group 1 (injection mode) and Group 2 (compensator mode), does the Setpoint need to be reset to the Reference Setpoint every time it crosses between Group 1 and Group 2 or can the setpoint be maintained?</p> <p>As tying this reset of the setpoint to the minimum active power (i.e. 0 MW), it is correlated to the wind speed for all offshore wind PPM's. This might trigger a sudden large shift in reactive power exchange which might not be desired.</p>

### Answer of ELIA

For PPMs that can seamlessly operate between Group 1 (injection mode) and Group 2 (compensator mode), Elia requires that the setpoint is maintained to avoid large variations of reactive power during the transition from one mode to another. The parameters for such PPM's (as e.g. the minimum threshold to be able to supply the Technical Control Band) have to be carefully defined in Annex 1 of the contract after discussion between the VSP and Elia.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
49	BOP	II.6.7	The connection requirements for offshore wind farms allow in case of non-availability of units (due to failure or maintenance) that the reactive power capability might be adjusted based on the current Available Generation Capacity Pav instead of Pnom. As the amount of turbines available and therefore the reactive power capability can fluctuate a lot, can this information be shared automatically in the interface used for setpoint exchanges (revolt)? The communication flow from wind parks to Elia (e.g. in terms of turbines in maintenance, ...) is to be finetuned.

Answer of ELIA

Elia first reminds that any restriction (forecasted or not) in the reactive power control capability is to be communicated to Elia as per modalities described in art. II.6.7.

Elia takes due note of BOP's comment concerning the fine-tuning of the communication flow and will take this feedback into account in order to optimize the process in parallel with foreseen future operational evolution.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
50	BOP	II.6.8	Note that the conditions and response times applicable in Automatic service delivery mode in this case are not feasible to comply with and will switch to manual control service type.

Answer of ELIA

Elia confirms that modalities foreseen in art. II.6.8 only applies for the manual control service type as it concerns issues with the electronic data interchange that are used for the exchange of setpoint change request.

Change in the T&C VSP?

Article II.6.8 has been clarified to precise that the modalities apply in the context of the Manual Control Service Type.

Number	Stakeholder	Article	Feedback of Stakeholder
51	BOP	II.7.1 e)	For offshore wind farm connected with a long submarine export cable at the Access Point, it is assumed the Grid Voltage is considered at the Access Point side (Elia side) of the export cable and not at the high-voltage side of the step-up transformer.
Answer of ELIA			
Elia refers to the 46 <sup>th</sup> answer in this consultation report.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
52	BOP	Annex 1/ Annex 12	<p>For offshore wind farms, the Qtech_min and Qtech_max may depend on the actual active power production. The shape of the technical control band is therefore not rectangular. For example, at high active power production the reactive capability may be reduced compared to lower active power production levels. How does this need to be considered? The BOP proposes that in addition to the minimum threshold to be able to supply the Group 1 technical band, a maximum active power threshold is added.</p> <p>It is assumed the Group 1 and Group 2 technical control band can be defined independently of each other even in case both are related to the same Technical Unit.</p>
Answer of ELIA			
Elia requires that the Technical Control Band is available at all time above the Minimum Active Power Threshold for voltage and reactive power control and is not in favor to introduce a maximum active power threshold above which the service cannot be delivered. The Technical Control Band is determined during the prequalification after discussion between the VSP and Elia in order to assess the frequency and magnitude of these power bands restrictions and to define the band consequently.			
Change in the T&C VSP?			
No			

### 2.3.4 RWEST

Number	Stakeholder	Article	Feedback of Stakeholder
53	RWEST	General remark	<p>RWE Supply and Trading GmbH (RWEST) once again very much welcomes the opportunity to comment on the future design of the ancillary service of voltage and reactive power control and thus appreciates the opportunity to respond to the public consultation organized by Elia, on the Terms and Conditions for Voltage Service Providers (T&amp;C VSP). This response builds upon our response to the earlier consultation held by Elia in September 2018, regarding the study on the future design of the ancillary service of voltage and reactive power control (Design Study).</p> <p>RWEST is part of the RWE Group which is a leading global energy company with over 40 GW of installed capacity in Germany, the UK and Benelux. RWEST is, amongst other things, responsible for the marketing of ancillary and other grid services out of the T-Power power plant and in this capacity, RWEST is providing reactive power to Elia for the purposes of voltage control.</p> <p>We welcome the reduction of the minimum volume to 1MVar for generation or absorption as included in Art II.4.1, as well as the change in the calculation of remuneration reductions for non-delivery of MVar which will allow new technologies to participate in the market for MVar services in the future.</p> <p>We are, however, concerned about the calculation of remuneration of the service and the price structure as set out in Annex' 2 and 12 and urge Elia to consider the following remarks.</p>
Answer of ELIA			
Elia thanks RWEST for the supporting comment. Elia refers to the 2 <sup>nd</sup> and 54 <sup>th</sup> answers in this consultation report for an answer to the points regarding the Annex 2 and 12.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
54	RWEST	Annex 2/Annex 12	<p>Finally, we would like to point out a confusion included in the description of the formula for the remuneration included in Annex 2. The formula refers to "the price of Reactive Energy for quarter-hour n as determined per Annex 12". Annex 12 however, does not clarify if prices are set for the hourly or quarter-hourly provision of MVar. If the price for Reactive Power and the</p>

			requested Reactive Power are given for the quarter-hour n then we do not understand why it should be multiplied by $\frac{1}{4}$ in the formula of Annex 2.
<b>Answer of ELIA</b>			
Elia wants to precise that the price is defined for an energy (in €/MVarh) while the formula in annex 2 refers to the reactive power required (in MVar). The factor 1/4 is used for the conversion from power to energy on a quarter our basis. The unit of the MVar price has been added in Annex 12 for clarity.			
<b>Change in the T&amp;C VSP?</b>			
The unit of the MVar price (€/MVarh) has been added in Annex 12.			

### 2.3.5 Nemo Link

Number	Stakeholder	Article	Feedback of Stakeholder
55	Nemo Link	General remark	<p>Nemo Link Limited (NLL) welcomes the opportunity to respond to Elia's consultation on the MVAR service T&amp;Cs.</p> <p>We agree with Elia that the MVAR service is a critical service to maintain stable and efficient operation of the Belgian electricity grid.</p> <p>NLL has reviewed the T&amp;Cs and it is capable of providing the service and is committed to cooperating with Elia throughout its procurement of the MVAR service.</p> <p>NLL already provides a reactive power service in Great Britain and receives a regulated tariff for this under NGESO's Obligatory Reactive Power Service (ORPS).</p> <p>NLL has currently the means to offer up to 344Mvar of reactive power in both injection and compensation modes. NLL's capability to deliver this service is a result of significant investments during construction in order to comply with its GB grid code requirements. Delivering the MVAR service itself however results in converter station losses, resulting in increased auxiliary power demand and wear and tear on cooling systems.</p> <p>Under the new MVAR service, we understand that NLL will be categorised as an 'existing HVCD interconnector' and therefore will be subject to voluntary provision of the MVAR service. We understand that this means that NLL has the option but not the obligation to submit an offer to Elia to provide the MVAR service. We also understand that any tariff for MVAR service requires approval by federal regulator CREG.</p>

			<p>It is important to note that NLL is subject to the 'Cap and Floor' regulatory regime, under which revenues above the 'cap' level flow back to GB/BE consumers and where NLL could receive floor support when revenues are below the 'floor' level. We consider it in this context key that NLL could also get remunerated at Belgium side for the provision of reactive power (in line with the ORPS service in GB) to allow for a fair and equitable treatment of both Belgian and GB consumers.</p>
Answer of ELIA			
<p>Elia takes due note of the position of Nemo Link and confirms Nemo Link interpretation of the participation conditions (art 254 of the Federal Grid code). Following Article 4.2 of the Commission Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules, Nemo Link is indeed considered as an existing HVDC interconnector as Nemo Link concluded a contract for the purchase of HVDC equipment on the 05/06/2015 i.e. before the two years after entry into force of this regulation. .</p> <p>Elia reminds that the VSP's have to propose a free price to provide the service in their offer according to price structure described in the contract. The determination of a reasonable price for the voltage and reactive power control service is not part of the T&amp;C VSP as this is a competence of the regulatory authority (the CREG) that assesses the reasonability of prices following the procedure described in article 12qq of the <a href="#">E-law</a>.</p>			
Change in the T&C VSP?			
No			

### 2.3.6 [Confidential]

Number	Stakeholder	Article	Feedback of Stakeholder
56	[Confidential]	General remark	<p>How is the tender organized and how often? Is it per region, or for the whole Belgium? How does Elia see the functioning of the competition between the tender participants, given that reactive power provision is a typical local service?</p>
Answer of ELIA			
<p>The service provision is described in article 12 quinquies of the Electricity Law. The tender is organized for Belgium once a year. For the provision of service in 2021, this tender will be organized in end April/beginning of May 2020 with obligation to participate for the assets required by the Federal Grid Code, as mentioned in the <a href="#">explanatory note</a> provided in the public consultation. The tender process is organized conform this existing legal framework.</p> <p>Regarding the functioning of the competition among market participants Elia refers to her analysis and conclusions described in the <a href="#">design note</a> of 2018.</p>			



Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
57	[Confidential]	General remark	How does the reactive power provision work in terms of priority, in combination with the other grid services (such as FCR, secondary or tertiary control)? Is a reservation of the apparent power output necessary at all times? Is there a weekly / daily bidding procedure?

Answer of ELIA

Combining the provision of the reactive power service with the provision of other ancillary services such as FCR, aFRR or mFRR is possible as long as it is technically feasible and it has no negative impact for all the involved service providers.

A reactive power band needs to be defined for each Technical Unit to provide the service. This band is defined in the VSP offer during the yearly tender for the contract duration and no bidding procedure is organized. As stated in art. II.4.1 and II.5.1, this band has to be all the times available for the service when the Technical Unit is above the minimum active power threshold as defined in Annex 1.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
58	[Confidential]	General remark	It seems like two reactive power modes are requested: 1. Reactive power via a constant MVar setpoint 2. Voltage control, based on a sensitivity coefficient and the measured voltage at the grid connection point. Please confirm that this understanding is correct and that thus no cos phi mode is expected.

Answer of ELIA

Indeed Elia confirms that these are the two control modes required by the service and that no cos phi mode is expected. Elia also reminds that the technical requirements for the service are described in the Federal Grid Code.

Change in the T&C VSP?

No

Number	Stakeholder	Article	Feedback of Stakeholder
59	[Confidential]	General remark	With the increasing renewable energy, the voltage of the network is expected to fluctuate more and more, also for shorter periods of time in the order of minutes rather than quarter of hours. How does the increased quality of a reactive power response (in the order of seconds) fit within the current proposed product and how does such a high quality delivery get financially compensated?
Answer of ELIA			
The current product already requires that any voltage variations have to be handled by the automatic voltage controller that need to be installed for the Technical Units obliged to provide the Automatic Control Service Type.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
60	[Confidential]	II.3.4	The document refers to the reactive power provided also in the DNO area. Is this service also reimbursed by Elia, or by the corresponding DNO's? How is the tender organised in such a case?
Answer of ELIA			
The VSP contract is a contract between Elia and the VSP in order to provide the service at Access Point or (for units located in distribution grid) at the interconnection point. Any grid user connected to a distribution grid can voluntarily participate to the service but needs to designate its DSO as VSP to offer the service at Elia interconnection point. As the DSO needs to be the VSP, the DSO is in charge of all the aspects of this contract including the participation to the tender as VSP and the invoicing. The financial relation between the DSO and the Grid User that designates it as VSP is out of scope of the VSP contract.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
61	[Confidential]	II.3.3	With the awarding of the tender, does the participant get a minimum guaranteed participation (in the form of the determination of the coefficient)? In case the coefficient is determined only after the tender, it might be that Elia sets it to a lower value, which results in a low reactive power provision and

			thus possibly no interest from the participant to still provide reactive power.
<b>Answer of ELIA</b>			
The determination of the sensitivity coefficient is performed by Elia in collaboration with the VSP during the prequalification (as described in Annex 13) so that the VSP can consider it before making its final offer. The sensitivity coefficient can still be adapted until signature of the contract if the VSP provides a technical justification (e.g. internal grid study) and with the agreement of Elia			
<b>Change in the T&amp;C VSP?</b>			
The article II.3.7 e) has been adapted to clarify the possible update of the sensitivity coefficient.			

Number	Stakeholder	Article	Feedback of Stakeholder
62	[Confidential]	II.3.7 e)	“It is the VSP’s obligation to ensure that the relative sensitivity coefficient value corresponds at all times to reality” The sentence is somehow ambiguous, given the fact that the definition of the coefficient is done by both parties. Probably this paragraph refers to the fact that the delivery should be in line with the agreed upon coefficient?
<b>Answer of ELIA</b>			
Indeed it refers to the fact that the agreed sensitivity coefficient should be in line with the actual reaction of the Technical Unit. Should the behavior of the Technical Unit change, then the VSP has the obligation to define a new sensitivity coefficient after providing a technical justification and after agreement of Elia.			
<b>Change in the T&amp;C VSP?</b>			
The article II.3.7 e) has been adapted to clarify the possible update of the sensitivity coefficient.			

Number	Stakeholder	Article	Feedback of Stakeholder
63	[Confidential]	II.5.1 and II.5.3	Does the Automatic Control Service Type get activated by the control system of the Technical Unit when the power is above the minimum active power threshold, or does Elia active it? These two paragraphs seem to contradict each other
<b>Answer of ELIA</b>			
The automatic service is activated automatically by the control system of the Technical Unit to follow voltage variation when the power is above the minimum active power threshold. The structure of the article II.5 has been clarified in order to split the conditions related to the automatic service and to the manual service.			

Change in the T&C VSP?
The structure of the article 5 has been adapted (split into two articles II.4 and II.5)

Number	Stakeholder	Article	Feedback of Stakeholder
64	[Confidential]	II.5.4 and II.5.6	Setpoint should be achieved within 5 min. Does this refer to the Manual Activation? What response time is expected for the Automatic Control Service Type (to the voltage of the network that is continuously changing). Same question for II.5.6

#### Answer of ELIA

Indeed its refers to the Manual Control Service Type only. The structure of the article II.5 has been clarified in order to split the conditions related to the automatic service and to the manual service.

A Technical Unit providing the Automatic Control Service Type should react directly to any grid voltage variation.

Change in the T&C VSP?
The structure of the article 5 has been adapted (split into two articles II.4 and II.5)

Number	Stakeholder	Article	Feedback of Stakeholder
65	[Confidential]	II.7.1	Since voltage can change quite fast, this verification method does not seem fit for the Automatic Control Service. This does make sense for the manual control. For the voltage control delivery, a check based on second based delivery would make more sense.

#### Answer of ELIA

Based on analysis, Elia thinks that there are no indications showing that using 15min measurements and meterings does not fit for the delivery control of the Automatic Control Service. Using 15 min measurements and meterings is also a pragmatic approach given the availability of data and the amount of data to process for the delivery control.

Change in the T&C VSP?
No

Number	Stakeholder	Article	Feedback of Stakeholder
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66	[Confidential]	Annex 2	It seems like the formula for remuneration for Controlling technical units is not correct, because if the actual delivery is perfect, the Qreq_rem is 0 and thus the price remunerated is also 0.
Answer of ELIA			
The remuneration will be 0 in case no MVAR need to be injected or absorbed according to the droop curve defined by the sensitivity coefficient and the V_start_up. This case only occurs when the grid voltage is equal to the start-up voltage which is the reference voltage. Any voltage deviation compared to the V_start_up will be remunerated according to the formula.			
Change in the T&C VSP?			
No			

Number	Stakeholder	Article	Feedback of Stakeholder
67	[Confidential]	Annex 7	The formula suggested for the remuneration reduction for non-delivery of the manual control service type is an example, or is it fixed given the mentioned 10h?
Answer of ELIA			
It is a fixed value of 10h as it is the average duration of a manual setpoint.			
Change in the T&C VSP?			
No			

## 3 Stakeholders contributions – Consultation from the 20<sup>th</sup> of March 2020 to the 8<sup>th</sup> of April 2020

### 3.1 Febeliec

Number	Stakeholder	Article	Feedback of Stakeholder
68	Febeliec	General remark	Febeliec thanks Elia for the opportunity to respond to the Dutch and French versions of this document. We have no further comments on the translations other than the ones we formulated on the English version in February. We attach these comments

			for your convenience.
Answer of ELIA			
Elia refers to the answers 14 to 43 in this consultation report for an answer to Febeliec remarks.			
Change in the T&C VSP?			
No			

### 3.2 FEBEG

Number	Stakeholder	Article	Feedback of Stakeholder
69	Febeg	General remark	<p>Elia has put at disposal of the stakeholders the French and Dutch translations of the English version of the T&amp;C VSP. As the consultation only concerns comments on the French and Dutch translations of the English version, we will only provide our comments on these.</p> <p>We refer to the comments provided previously on the English version of the T&amp;C for FEBEG's overall position on the proposed Terms and Conditions for Voltage Service Providers (T&amp;C VSP)2.</p> <ul style="list-style-type: none"> <li>- French version : Definitions : the term "Valeur de consigne" is defined, but the term « Point de consigne » is used in the contract.</li> <li>- Annex 6 : in the NL version the determination of the concerned month is not well expressed :</li> </ul> <p>Where %Qfailed is between 30% and 80%, a 25% reduction shall be applied to the remuneration for the Service for this Technical Unit as set in Art.II.8.2, for the entire month as of which the sample was constituted.</p> <p>o Where the %Qfailed is between 80% and 100%, Elia shall deem that the Service has not been supplied and shall therefore not remunerate the VSP for the Technical Unit concerned, for the entire month as of which the sample was constituted.</p> <p>Indien %Qfailed tussen 30% en 80% ligt, wordt een vermindering van 25% toegepast op de vergoeding van de Dienst voor deze Technische Eenheid, zoals bepaald in</p>

			<p>artikel II.8.2, voor de volledige maand vanaf wanneer de steekproef werd uitgevoerd.</p> <p>o Indien %Qfailed tussen 80% en 100% ligt, beschouwt Elia dit als een niet-levering van de Dienst en zal zij de VSP bijgevolg niet vergoeden voor de betreffende Technische Eenheid, voor de volledige maand vanaf wanneer de steekproef werd uitgevoerd</p> <p>Lorsque %Qfailed est compris entre 30 % et 80 %, une réduction de 25 % est appliquée à la rémunération du Service de cette Unité Technique, comme indiqué à l'article II.8.2, pour l'intégralité du mois à partir duquel l'échantillon a été constitué.</p> <p>o Lorsque %Qfailed est compris entre 80 % et 100 %, Elia considérera que le Service n'a pas été fourni et ne rémunérera donc pas le VSP de l'Unité Technique concernée pour l'intégralité du mois à partir duquel l'échantillon a été constitué.</p> <p>- Annex 9 : the booking references in the tables in the FR and NL versions are not aligned with the corresponding remunerations</p>
Answer of ELIA			
Elia has adapted these points in the French and Dutch versions of the T&C VSP			
Change in the T&C VSP?			
<ul style="list-style-type: none"> <li>Annex 9 of the FR and NL T&amp;C VSP has been corrected.</li> <li>The use of "Point de consigne" has been harmonized in the FR version of the T&amp;C VSP</li> <li>The formulation in Annex 6 of the NL version has been clarified</li> </ul>			