CONSULTATION REPORT

Report on the public consultation regarding the study report for voltage service and reactive power control review and recommendations for design optimisations

23 December 2023

1. Introduction

Elia organized a public consultation from 28th of September 2023 to 30th of October 2023 regarding the voltage service and reactive power control review and recommendations for design optimisations.

A large part of the feedback given by the market parties has already been discussed informally with the market parties during the Belgian Grid Working Group on the 7th of December.

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:

- BASF;
- BOP;
- FEBEG;
- Febeliec.

No responses were received that were designated as confidential:

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 contains the annexes of the consultation report.

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

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 study report. However, this column does not contain the final text. For this purpose, the final study report must be consulted.

4. Comments received during the public consultation

4.1 Specific comments received during the public consultation

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

SUBJECT	STAKEHOLDER	FEEDBACK RECEIVED	ELIA'S VIEW
Service obligation	Febeliec	Febeliec wants to insists that participation to voltage service and reactive power control should be voluntary for demand facilities	For demand facilities that do not have the capability to provide the voltage and reactive power service there is indeed no obligation to do so. However, following Art. 221 §2 of the Code of Conduct, once a transmission grid user has participated to the Voltage and Reactive power control service, they are obligated to offer this capacity as long as this capability exists.
Remuneration	Febeliec	any remuneration scheme should ensure that efficiency is guaranteed and system costs are not unduly increased	Elia agrees with this statement.
Price setting for the MVAr service	Febeliec	On the price setting evolution, Febeliec understands the endeavor of Elia but wonders how comparability will be ensured, as it would become more complex with different parties using different fixed and variable formula elements and different future price indices. This could then lead to an (ex post) more costly solution being selected. Febeliec is skeptical to what extent it would be feasible to compare different fixed prices and price formulas with each three different parameters in a correct forward-looking way.	Elia understands the concern of Febeliec. There are two different topics to be addressed here: 1. Activation cost: the prices for activation will be known before an activation request is sent to the VSP and as such the most cost-efficient activations can be performed.

			2. Offer comparison: the reasonability assessment of the prices themselves is a competency of the CREG and will be performed using the indices available at the time of judgement. Using these values a correct comparison between the different offers can be made.
Activation control	FEBEG	For the sake of clarity, we understand that the 'resets' of Qinitial and Vinitial foreseen in the current VSP Contract will not change.	Elia confirms that this is indeed the case.
Penalty system	FEBEG	FEBEG insists that this new system should globally not increase the current level of penalties: it should not frighten potential new entrants but only encourage VSPs to deliver the best possible service based on the technical capabilities and limitations of their assets. In this view it is important to consider that the delivery (production or absorption) of reactive power at the injection point is impacted by several factors, i.e. the precision of the regulation (and of the metering equipment), changes in active power production (and related reactive power absorption by the step-up transformer), local consumers.	The goal of the new penalty system is indeed not to increase the current level, but to penalize more fairly and avoid unjustly penalizing market parties because of samples that do not represent to overall delivery of the service. For the reasons that FEBEG highlights in its response, Elia has also decided to use the penalty system based on the difference between the measured and the requested reactive power (proposal 2 in the Final report).
Penalty system	FEBEG	FEBEG underlines that the current tolerance band (7.5% of Qtech_max) is a minimum.	The current tolerance band (which is 7.5% of Q_{tech_max} , with a minimum of 1 MVAr and a maximum of 25 MVAr) will be maintained.
Penalty system	FEBEG	FEBEG welcomes Proposal 2 which is based on the discrepancy volumes and incentivizes the VSP to deliver the requested volume as closely as possible.	Elia agrees with this assessment, and retained proposal 2.

Penalty system	FEBEG	However, FEBEG considers absolutely necessary to deduct the tolerance margin from the discrepancy, instead of applying the penalty only on the failed Qh.	Elia will align this with the other balancing products and thus the proposal has been modified to deduct the tolerance band in the determination of the difference.
Penalty system	FEBEG	Note that the Study report states “incentivizes the market party to deliver as much reactive power as possible” while under the current (and proposed) penalty system, over-delivery is penalised in the same way as under-delivery. It is not logical, FEBEG asks that over-delivery should be less penalized than under-delivery, as the VPS is only remunerated for the requested volume (e.g. penalty factor in case of over-delivery should not exceed 0,5).	Elia agrees and has adapted the penalty formula to reflect this.
Penalty system	FEBEG	In case Proposal 1 (based on the number of quarter-hours failed) would however be selected, we request that the formula proposed in the workshop of 28/06/2023, deducting a tolerance from the %Qfailed, is maintained.	As explained in the final report, Elia will not retain this proposal, given the lack of incentive to achieve the setpoint to the best of the ability of the VSP.
Communication	FEBG	New communication protocol: FEBEG regrets that the current communication protocol (ReVolt) cannot be maintained for market parties at their request. FEBEG requests that if a new protocol is imposed, sufficient time, assistance and testing possibilities are foreseen for the market parties to implement it. The implementation plan should also be agreed upon with the market parties.	The implementation plan has been presented during the WG Belgian Grid and no specific comments were received.
Indication of the need for the MVAR service	FEBEG	FEBEG requests to respect the confidentiality of technical data of assets on the map giving an indication of the amount of obligated assets and their approximated size related their reactive power capabilities: it should be presented in such manner that technical data of individual assets can in no way be deduced.	Elia assures the market parties that no confidential information will be visible or derivable from the graph.
Indication of the need for the MVAR service	FEBEG	The categorisation of the MVAR needs in 1/No or low needs, 2/Medium needs and 3/High needs is very relative. Concrete figures or ranges would be useful, also showing the rate of utilisation: is it a continuous need or more concentrated on peak moments? More detailed information is important, especially to attract non-mandatory units to deliver the services.	Elia will make sure that the information on the map is as detailed and transparent as possible, without displaying confidential information of the assets, as requested by FEBEG.

Indication of the need for the MVAR service	FEBEG	For concrete projects, FEBEG asks that Elia can give more accurate estimations of the local needs.	Elia confirms this and welcomes all market parties that have a concrete project to contact Elia to get a better insight into the local needs.
Price setting for the MVAR service	FEBEG	As a general comment, FEBEG pleads for shorter lead times between the tender and the allocation of the contract in order to keep the risks (and so the total costs) as low as possible.	Elia understands the comment from FEBEG, however Elia is bound by the European/Belgian legislation for the tendering procedures. The relatively long lead time is required to create a correct reporting to the CREG and their reasonability assessment. However, with the option to use a variable price formula, Elia expects a significant reduction of the risks associated with the tender timing.
Price setting for the MVAR service	FEBEG	FEBEG considers the possibility of a price formula to be an interesting option, updating the price for the delivery year on the basis of a price index in December. However, we also ask to keep also the possibility of fixed prices as in the current design. The market party should be free to choose between these 2 options.	Elia confirms that both options will be maintained.
Price setting for the MVAR service	FEBEG	FEBEG assents with Elia that a “fixed” price formula per technology is not opportune, for the reasons given in the report (complexity to determine a correct formula, local constraints,…). FEBEG therefore strongly advices against such an approach.	Elia understands the assessment of FEBEG and will not propose the option at this time.
Participation of non-active power related assets	FEBEG	The option to declare partial un-availabilities should also be open for other technologies which can deliver the MVAR Service independently of their active production (e.g. when there is no gap between the injection mode and the compensator mode). This will avoid that they face penalties during their maintenance or outages, or alternatively that they offer only part of their reactive power capabilities to Elia.	Elia agrees and has modified its proposal to reflect this. However, it is important to note that this does not detract from the current obligations that the VSP has.

Change in the application of the MVAr tariffs	FEBEG	FEBEG agrees that the change in the MVAR tariff improves the situation for sites with both injection and consumption which participates to the MVAR Service. However the correction of the MVARh deliveries at the access point on the basis of the activations requested by Elia remain necessary, as foreseen in the tariff proposal.	This will indeed be maintained.
Participation of non-mandatory units	FEBEG	Even after a first or multiple participation(s) to the MVAR Service, any further participation remains on a voluntary basis	This is out of the competence of Elia. Following Art. 221 §2 of the Code of Conduct, once a transmission grid user has participated to the Voltage and Reactive power control service, it is obligated to offer this capacity as long as this capability exists.
Participation of non-mandatory units	FEBEG	In case the prices proposed by the market actor in the MVAR tender would be deemed not reasonable by CREG, the delivery of the service at other prices cannot be imposed. The participant is free to accept the maximum price considered as reasonable by CREG, or remove its bid.	This is out of the competence of Elia. FEBEG (and its members) may provide these elements during the non-public consultation organized by the CREG after the reasonability assessment in order to show why a Public Service Obligation would not be justified.
Participation of non-mandatory units	FEBEG	FEBEG welcomes the possibility to recover investment costs required to comply with the communication standards imposed by Elia. These costs should be recovered though an upfront payment or a fixed monthly fee, independently of the activation requests. FEBEG considers that this should also apply for mandatory units, as the communication standards are imposed by Elia and – as proposed in this study – may change over time.	Elia agrees on the first point and will propose this change in the next version of the T&C VSP. However, Elia does not agree on the second one. Assets need to be able to provide the reactive power and voltage control service and therefore have an obligation to comply with the standards that Elia sets out. Elia does understand the point of FEBEG and will explore IT implementation options to limit the financial and time impact for the market parties.
	BOP	Offshore wind farms are today not correctly remunerated for the mandatory Mvar services they provide to Elia. The use of a tender procedure suggests that all (mandatory) participants are correctly remunerated in accordance with a price they offer in a competitive procedure. In practice, however, the cost-based prices submitted by the offshore wind parks are year after	Elia has no insight into the price assessment. However, if the market parties feel that there are additional elements to take into account, they may bring them forward in the non-public consultation that the CREG organizes.

		year rejected by the regulator and the prices for the Mvar services are enforced by royal decree. These enforced prices do not cover for all investment and operational costs of the offshore wind parks.	
	BOP	As long as a proper remuneration for the Mvar services is not provided to the offshore wind parks, covering all investment and operational costs, a penalty system cannot be justified and is to be removed from the service design.	The penalty system equally applies to all market parties offering the service in order to provide them the right incentives. Elia does not have the right, nor the necessary information to foresee exceptions based on the inadequacy (if any) of the VSP's remuneration.
Tender procedure	BOP	Improve the procedure to minimize the time between submission of the bids (in June) and decision on the final prices (in December);	As mentioned in the reaction to FEBEG's comment, Elia is bound by the European/Belgian legislation for the tendering procedures. The additional lead time is required to do a correct reporting to the CREG and their reasonability assessment. However, with the option to use a variable price formula, Elia expects that the issues arising from the tender timing should be resolved.
Tender procedure	BOP	The final decision of the service is currently too late (a few days or weeks prior to the start of delivery in the new calendar year) for both technical and financial reasons. Budget forecasts and decisions within companies are typically made in September or October. From a technical standpoint, if an (offshore) unit is not selected for year Y, this would require certain changes to the asset steering set-up. We therefore suggest to improve the procedure to be able to obtain decisions in September for the delivery in the next year. If the decision is made after September, units that are not selected should be offered a 'grace period' of 1 months (January) in which they can still deliver the service at the prices of Y-1 until they are able to return to a MVAR=0 control setup;	Elia can understand the comment of BOP. However, given the time required for the tender and the price risks associated with an earlier tender timing, Elia finds that the price risk takes priority and will not change the tender timing. After the introduction of the variable price, Elia will explore the option to change the tender timing.

Tender procedure	BOP	Tender administration can be simplified, for instance: units with mandatory participation can be automatically prequalified, based on the evaluation of the previous year(s), if no significant technical changes to the units are reported;	This is already the case.
Tender procedure	BOP	A service contract for multiple years could be offered, for instance a 2 or 3 year contract with prices to be inflated or determined based on a predefined formula in the contract.	Elia agrees that after the introduction of a variable price formula, a multiple year contract would be a good option in order to reduce the operational workload for all involved stakeholders.
Tender procedure	BOP	In case there is sufficient competition at a certain location/region in the grid (i.e. sufficient amount of reactive power offered compared to the reactive power needed at the location), there is sufficient price competitiveness, and prices automatically converge to reasonable levels. In that case the reasonability analysis by the regulator can be avoided and the procedure can be simplified by avoiding the publication of royal decrees. KPIs per location can be developed (and made public) to determine the required level of competition per location or region.	Elia will explore the option to add additional indicators on the level of competition at certain locations in the grid. However, Elia finds that in case sufficient competition is present at a certain point in the grid, there is no need for a modification of the price by the CREG and no Public Service Obligation will be imposed.
Activation control	BOP	Manual service type: Elia proposes to consider a value of zero in case the reactive power values of two successive 30” Reactive Power measurements in the timestep (quarter hour) of a setpoint request are not within the dead band. Since measurement errors and voltage variability may cause slight deviations in the measured Reactive Power as measured at the connection point, the actual measured Reactive Power of two successive 30” measurements should be considered instead of a zero value.	Elia takes a tolerance band into account in order to compensate for the measurement errors. In addition, Elia wants to provide an additional incentive for a market party to achieve its setpoints within 5 minutes. As such, the current proposal will be maintained.
Activation control	BOP	Manual service type: Furthermore, Elia proposes to only consider the second timestep in case the 5-minute window of setpoint request spans two timesteps. Due to the relatively fast response of offshore wind farms to setpoint requests, this may mean that the initial achievement of the setpoint request is disregarded by Elia. Instead, only the second timestep would be considered, during which the Reactive Power measurements may have already drifted to follow the variability of the voltage. To avoid incorrect assessment of the performance of the VSP, attaining the setpoint	Elia agrees and has modified the report to reflect this.

		within the tolerance band for two consecutive 30” measurements should be evaluated over the entire 5-minute window following a setpoint request, regardless if this window falls within one or two quarter hour timesteps.	
Activation control	BOP	Automatic service type: For the avoidance of doubt since it is not mentioned in the consultation report, it is assumed the Vstartup and Qinitial will still be recalibrated daily at midnight. This is crucial to avoid a potential drift in the Elia and VSP automatic service measurements which could lead to a misalignment in the expected performance.	Elia confirms that this is indeed the case.
Penalties	BOP	To avoid double penalization, quarter hours for which penalization also occurs via the access tariffs, should be excluded from the continuous activation control. This was the case in the original design, and should be kept. Alternatively, the penalization of MVAR in the access tariffs, for units that partake in the automatic VSP services, could be abolished.	Elia confirms that no changes will be applied here.
Penalties	BOP	As mentioned above, measurement differences can be an important reason for failed quarter hours. Remuneration and penalty calculations are done by Elia based on their energy meters at the connection point. However, voltage and reactive control on wind farms is done by a park controller, owned by the offshore windfarms and using internal (accurate) measurements. Regardless of the proposed penalty mechanism, we request a possibility to take into account possible offsets between Elia and windfarm measurements and the accuracy of the different meters for the calculation of the failed quarter hours and its tolerance.	There are two elements: 1. There is a tolerance taken into account in order to compensate for measurement errors and small deviations. 2. Elia expects VSPs to be able to take the impact of their internal assets into account.
Penalties	BOP	We don’t see a reason as to why the 30% tolerance for ‘non-compliant QH’ in the original design (as no penalty was due as long as Qfailed < 30%), was reduced to 5% in the workshop in June 2023 and has been completely removed in this consultation. Since Elia does not allow a direct measurement at the connection point for offshore wind farms, offshore wind VSPs need to estimate their control at the connection point from a measurement point located multiple kilometers away. This reduces the accuracy of the regulation, which would lead to an unfair penalization of offshore wind VSPs with the elimination of the threshold. Instead we propose the following:	Elia disagrees with BOP. The 30% tolerance band was in place to counteract the possible issues with representativity of the sample-based approach. Since in the new proposal a continuous activation control will be put into place, this additional tolerance band has no longer a place in the design. The tolerance band (7.5%) for the measurements issues and small deviations will remain in place.

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<tr><td></td><td></td><td>
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<tr><th>Q_failed</th><th>Penalty</th></tr>
<tr><td>0-30%</td><td>0%</td></tr>
<tr><td>30%-80%</td><td>Q_failed – tolerance%
(If the tolerance is 5%, the starting penalty would thus be 25%, similar to the original system, but it increases pro rata your Q_failed)</td></tr>
<tr><td>80%-100%</td><td>Q_failed
(no more tolerance in this 3rd band)</td></tr>
</table>

This proposal keeps the thresholds of the original system (at 30%), but the penalty in the middle band (30-80%) will move pro rata the Q_failed, thus will always be higher than in the original proposal (with a tolerance of 5%). This pro rata movement provides incentives to the VSP to continuously improve its performance, in contrast to the original system where the VSP sees no difference between a Q_failed of 31% or one of 79%.</td><td></td></tr>
<tr><td>Penalties</td><td>BOP</td><td>The discrepancy as proposed by Elia in proposal 2 is defined as the delta between Qrequested and Qmeasured, which disregards the tolerance band of 7,5% described in section 4.1.2 of the consultation (see a. in the figure below). Since operation within the tolerance band is compliant, any penalty should only be calculated from the edge of the tolerance band around Qrequested and not from Qrequested itself (see b. in the figure below). This to account for the contractual performance requirements, and the technical measurement differences which have been highlighted above.
Based on an analysis, it is however observed that even with the proposed modifications and in part due to the high penalty factor of 1.5, proposal 2 would result in disproportionate penalties compared to the revenues in cases of temporary non-delivery of the service and cannot be supported by BOP.</td><td>Elia agrees with BOP on the first point and has adapted its proposal accordingly.
Regarding the second point, Elia disagrees that this leads to disproportionate penalties. Firstly, the remuneration of the VSP is used as a reference and as such penalty is always proportional to the remuneration that the VSP receives. Secondly, the difference with the requested reactive power is used, so the VSP will only be penalized for the amount that is not correctly delivered.</td></tr>
<tr><td>Communication</td><td>BOP</td><td>Please provide some more clarification on the “grace periods” (exemption from the penalties as per T&C) in case you cannot deliver the service, for instance due to a forced outage. For offshore windfarms, a ‘forced outage’ cannot simply be deduced from the power output; as 0MW can occur due to a forced outage or due to a lack of wind. The communication procedure for scheduled or unscheduled unavailability of an asset or the voltage service is unclear.</td><td>Elia confirms that during a Forced Outage, a VSP is not obligated to deliver the VSP service. The declaration will be moved to the communication protocol in order to improve the communication between NCC and the VSPs to give clarity for the NCC operators on the real-time availability.</td></tr>
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		Currently, unavailability declarations happen via e-mail. An availability declaration via a communication protocol will result in extra setup costs. For the avoidance of doubt, a scheduled voltage service unavailability that is communicated 24 hours in advance has to be excluded from the penalty calculation.	A declaration of unavailability does not detract from the obligation to deliver the service. So if there is no valid reason for a reduced technical band, or no availability at all, the VSP will be penalized.
Communication	BOP	An update of the communication protocol from the existing XML based ReVolt interface to a different communication protocol will result in additional one-time investment costs for VSPs. It is suggested that these investment costs are recuperated in a one-time compensation. This to avoid that these investment costs need to be recuperated through the activation prices, since this will lead to an inflation of the activation prices due to the inherent volume risk.	Assets need to be able to provide the reactive power and voltage control service and therefore have an obligation to comply with the standards that Elia sets out. Elia does understand the point of FEBEG and will explore IT implementation options to limit the financial and time impact for the market parties.
need for MVAR service	BOP	An indication of the need for Mvar services can only be welcomed to better estimate the number of activations expected in an area. However, to estimate the overall service provision the three provided levels of low, medium and high need would not provide much actionable insights to market parties. Instead, this information should be supplemented with the expected distribution within the technical band for both manual and automatic control (e.g. expressed in percentage of technical band) and separated respectively for the production and absorption of reactive power, and in injection mode and compensator mode.	Elia will make sure that the information on the map is as detailed and transparent as possible, without displaying confidential information of the assets.
Price setting	BOP	We are in favour of further investigating a design with price formulas which can be proposed by the VSP during submission of the bids for several reasons: (i) it might simplify the procedure, as the VSP takes less risk on the time between submitting the bid and the time of contract award, (ii) it might allow for multiple year contacts, (iii) it might allow for prices to vary within the year (f.i. monthly) to better mirror the costs structures related to the service. This proposal further develops the proposed new market design by Elia and might require less frequent tenders (i.e. not annually). Since the operational costs when providing the service are directly linked to the market price, the preference goes to prices varying within the year (so the Epex spot can be used as reference), instead of fixing the prices prior to the start of the year (f.i. by averaging the futures prices, as proposed in the consultation).	Elia is happy that BOP is in favor of the design and will after its implementation indeed explore the option for multiple year contract. Elia will propose the usage of spot prices in the next T&C VSP.

Price setting	BOP	While the proposed market design by Elia indicates the price bands will be maintained, it is suggested that the pricing of the lower and upper price bands are decoupled. In case of operation in price bracket P2, the full volume should be compensated at the Price 2 instead of at Price 1 for the volume up to Q1 and the remainder at Price 2 as is the case in today's market design. As demonstrated by various wind farms in data supplied to the CREG, this decoupling of the price brackets would allow for price formula's which better mirror the actual costs structure to provide the service.	Elia has no insights into the documents provided to the CREG and as such has no detailed information to modify the current remuneration structure. However, if there is data supporting a change to the remuneration structure, Elia would be happy to receive this as well in order to investigate this proposal.
Compensator mode	BOP	We welcome the introduction of the additional band for compensator mode. While the proposal refers to batteries, also (offshore) wind farms when producing close to or below the Designed Minimum Operating Level (DMOL) on wind farm level are in fact operating in compensator mode on (at least) several wind turbines. Since the operational costs for providing the voltage services do not solely depend on the Reactive Power exchange, but also on the active power, the introduction of this additional compensator mode band will allow wind farms to reflect the actual cost structure of the service more accurately in the VSP tender submission.	Elia confirms that Offshore Wind parks can also use the additional band.
Cost	BOP	Elia proposes to provide units without an obligation to participate the possibility to recover the investment costs via the Mvar service tender procedure. We would argue that all service providers would be allowed to recover the additional investment costs needed in case Elia implements changes such as the communication standards to the Terms and Conditions of the VSP.	Assets need to be able to provide the reactive power and voltage control service and therefore have an obligation to comply with the standards that Elia sets out. Elia does understand the point of BOP and will explore IT implementation options to limit the financial and time impact for the market parties.
General	BASF	Wij vragen met aandrang dat meer aandacht zou worden besteed aan logisch, correct en consequent woordgebruik, zowel op vlak van definiëring van concepten/begrippen. Er zijn twee soorten diensten die kunnen geleverd worden: enerzijds het reageren op setpoints (=manual control service) en anderzijds technical units die een curve kunnen lopen en zo actief tegensturen op veranderingen van de spanning in het service measurement punt (=automatic control service). Uit de definities die nu gebruikt worden (manual/automatic control service), blijkt niet welke lading zij precies dekken. Je moet de definities van de begrippen goed kennen om te weten wat er bedoeld wordt. Daarenboven wordt de manual control service vaak niet manueel uitgevoerd (in tegenstelling tot wat de definitie doet vermoeden), maar op	The names of the types of service are described from an Elia point of view. So, a manual activation is an activation that is done manually by NCC. An automatic activation requires no intervention of the operator. From the perspective of the service delivery, there is no distinction between a discrete and non-discrete (non-controlling) asset: there is a request made by

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<td>een geautomatiseerde wijze om binnen de 5minuten gereageerd te hebben op een gevraagd setpoint. Dit maakt het uiteraard helemaal verwarrend.
Daarnaast kunnen de groep van technical units worden opgedeeld in twee groepen op basis van de aard van het werkingsinterval voor de setpoint controle. Namelijk enerzijds technical units met een discreet werkingsgebied, zoals bijvoorbeeld een condensatorbank van 6MVAr die ofwel 0MVAr ofwel 6MVAr kan leveren, maar niets daartussen, en anderzijds technical units met een niet-discreet werkingsgebied, zoals bijvoorbeeld een generator die van -XMVAr tot +XMVAr kan leveren, maar ook alles daar tussen (mits enige tolerantie).
De groep van technical units kan verder worden opgedeeld in twee groepen afhankelijk of ze al dan niet een curve kunnen lopen en zo actief kunnen tegensturen op veranderingen van de spanning in het service measurement punt. Er zijn enerzijds assets die dit wel kunnen zoals bijvoorbeeld een STEG gekoppeld aan het 150kV net van BASF. Anderzijds kunnen sommige assets dit niet zoals bijvoorbeeld drives die gekoppeld zijn aan lagere spanningsniveaus en een net ondersteunende eigenschap hebben. Dit wil zeggen dat ze niet actief gaan tegensturen tegen spanningsveranderingen, maar enkel ondersteuning gaan bieden wanneer de netspanning buiten bepaalde banden treedt. Maar ook condensatorbanken kunnen geen curve lopen omwille van hun discreet werkingsinterval.

Dit leidt voor ons tot drie onderscheiden groepen van technical units (zie onderstaande tabel), terwijl Elia maar twee groepen van technical units onderscheidt, namelijk controlling en non-controlling technical units:
<table>
<tr><th></th><th>Condensatorbanken</th><th>Drives</th><th>STEG</th></tr>
<tr><td>Setpoint</td><td>Discreet</td><td>Niet-discreet</td><td>Niet-discreet</td></tr>
<tr><td>Curve</td><td>Nee</td><td>Nee</td><td>Ja</td></tr>
<tr><td>Technical unit</td><td colspan="2">Non-controlling</td><td>Controlling</td></tr>
</table>
</td>
<td>Elia to the VSP for a certain volume. For a non-discrete asset, this requested volume will need to follow the discrete area of the asset. Elia considers that introducing this distinction would likely create confusion and complexity and proposes therefore to maintain the current two categories. The term “automatic” is also referred to in the Federal grid code (Art. 67), which in part serves</td>
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<tr>
<td>Penalties</td>
<td>BASF</td>
<td>1. Condensatorbanken: assets met een <u>discreet</u> werkingsgebied die <u>geen curve</u> kunnen lopen
De manier waarop de manual control (setpoints) op heden beschreven is, voldoet niet aan het discrete werkingsgebied van condensatorbanken. Hieronder hebben wij proberen aan te .geven hoe de tolerantie op Qreg correcter kan worden beschreven</td>
<td>Elia does not agree with the fact that any activation of the asset should be considered as a correct activation of the asset. Elia will propose both the option to declare the availabilities of the assets on beforehand, as well as the option to refuse a setpoint with</td>
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		In het geval de activatie volledig binnen 1 kwartier valt **1e kwartier**: Setpoint controle → Wordt er binnen de 5 minuten reactief vermogen geleverd (ongeacht om hoeveel reactief vermogen het gaat)? ➔ Ja: gelukt kwartier → Vergoeding (zie verder) ➔ Nee: gefaald kwartier → Penalty is op zijn plaats **2e kwartier**: Wordt er nog steeds reactief vermogen geleverd (ongeacht de hoeveelheid)? ➔ Ja: gelukt kwartier → Vergoeding (zie verder) ➔ Nee: gefaald kwartier → Penalty is op zijn plaats **Alle andere kwartieren**: Voer dezelfde controle uit als voor het tweede kwartier. In het geval de activatie 2 kwartieren overbrugt **1e kwartier**: Niet mee in rekening nemen. **2e kwartier**: Setpoint controle → Wordt er binnen de 5 minuten reactief vermogen geleverd (ongeacht om hoeveel reactief vermogen het gaat)? ➔ Ja: gelukt kwartier → Vergoeding (zie verder) ➔ Nee: gefaald kwartier → Penalty is op zijn plaats **3e kwartier**: Wordt er nog steeds reactief vermogen geleverd (ongeacht de hoeveelheid)? ➔ Ja: gelukt kwartier → Vergoeding (zie verder) ➔ Nee: gefaald kwartier → Penalty is op zijn plaats **Alle andere kwartieren**: Voer dezelfde controle uit als voor het derde kwartier.	10 seconds after sending the setpoint. This allows the asset to not be penalized if it is not available for the MVAr service.
Penalties	BASF	**1. Condensatorbanken: assets met een discreet werkingsgebied die geen curve kunnen lopen** Een mogelijke manier tot vergoeden en penaliseren van dergelijke assets met een discreet werkingsgebied die geen curve kunnen lopen, is de volgende: ➔ Een vergoeding en controle op basis van het minimum van (i) het gevraagde volume en (ii) het geleverde volume o Voorbeeld: 6 MVAr gevraagd, 4 MVAr geleverd ▪ Gelukt kwartier, er is reactief vermogen geleverd ▪ Vergoeding van het min van (6 ; 4) = 4 MVAr vergoed ▪ Geen penalty voor het missende volume van 2 MVAr o Voorbeeld: 6 MVAr gevraagd, 5,66 MVAr geleverd ▪ Gelukt kwartier, er is reactief vermogen geleverd ▪ Vergoeding van het min van (6 ; 5,66) = 5,66 MVAr vergoed	Elia does not agree with BASF. An incorrect activation (outside of the tolerance band) of an asset should result in a penalization, since this could lead to an unstable system. The NCC market engineer requests a specific setpoint to stabilize the voltage and if an unexpected deviation of this requested setpoint occurs, the issue is not necessarily resolved.

		▪ Geen penalty o Voorbeeld: 6 MVAr gevraagd, 7,66 MVAr geleverd ▪ Gelukt kwartier, er is reactief vermogen geleverd ▪ Vergoeding van het min van (6 ; 7,66) = 6 MVAr vergoed ▪ Geen penalty voor het teveel volume van 1,66 MVAr ➔ In het geval dat een activatie niet uitgevoerd is (0MVAr geleverd): Mislukt kwartier, de activatie werd niet uitgevoerd. Een penalty is op zijn plaats ➔ In het geval dat een activatie te laat was (pas in kwartier x): een penalty + een vergoeding voor het geleverde volume o 1e kwartier: mislukt kwartier, penalty o xe kwartier: gelukt kwartier, vergoeding voor het geleverde volume	
	BASF	Het verlenen van de VSP-dienst via condensatorbanken levert slechts een beperkte vergoeding op die volstrekt niet in verhouding staat tot de inspanningen die geleverd zouden moeten worden om een dag op voorhand de planning aan te leveren. Economisch gezien zou het dus eigenlijk beter zijn om niet deel te nemen… Wij wensen dan ook enkel de real-time gegevens aan te leveren (schakelstanden en beschikbaar vermogen) zoals we nu ook al doen (sectie 4.3 en sectie 4.6).	Within the proposed communication protocol it is both possible to do a ex-ante as well as a real time availability declaration, which means that an ex-ante declaration is not required for the participation to the service.
Communication	BASF	Ook in de toekomst, wanneer de pool van technical units 'hopelijk' verder uitgebreid wordt naar bijvoorbeeld 20 assets die 1MVAr kunnen leveren, gaan wij voor deze 20 assets op voorhand geen planning opvragen aan onze klanten en opleveren aan Elia, dit zou zeer veel effort zijn die niet in verhouding staat tot de return.	Elia will expect the assets to be available when they are above their defined Pmin. If no Pmin can be identified, they will have the option to refuse a setpoint within 10 seconds.
Prequalification	BASF	Wij zijn tevreden met het feit dat Elia de deelname van niet verplichte units wil vereenvoudigen. Het is absurd mochten we voor 20 nieuwe assets van 1MVAr telkens een volledige prekwalificatietest dienen te doorlopen (sectie 4.10).	Elia agrees with the assessment of BASF and has modified the report to reflect this.
Penalties	BASF	**2. Drives: assets met een <u>niet-discreet</u> werkingsgebied die <u>geen curve</u> kunnen lopen** De methode beschreven onder punt 4.1.2 als "the manual service type" gecombineerd met het tweede penalty proposal onder 4.2.2, leidt tot volgende interpretatie, waarmee BASF akkoord kan gaan.	Elia is happy that BASF can agree.

		In het geval de activatie volledig binnen 1 kwartier valt **1e kwartier**: Setpoint controle → Activatie binnen de 5 minuten uitgevoerd? ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **2e kwartier**: Wordt het verwachte reactief vermogen (Qreq) geleverd/verbruikt? In het geval van assets met een niet-discreet werkingsgebied die geen curve kunnen lopen verwachten we een steady state reactief vermogen met een tolerantie zoals beschreven onder 4.1.2 “The manual service type”. Voldoet Q_{meas} aan volgende vergelijking? $Qreq-Tolerance \leq Q_{\text{meas}} \leq Qreq+Tolerance$ ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **Alle andere kwartieren**: Voer dezelfde controle uit als voor het tweede kwartier. In het geval de activatie 2 kwartieren overbrugt **1e kwartier**: Niet mee in rekening nemen. **2e kwartier**: Setpoint controle → Activatie binnen de 5 minuten uitgevoerd? ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **3e kwartier**: Wordt het verwachte reactief vermogen (Qreq) geleverd/verbruikt? In het geval van assets met een niet-discreet werkingsgebied die geen curve kunnen lopen verwachten we een steady state reactief vermogen met een tolerantie zoals beschreven onder 4.1.2 “The manual service type”.	

		Voldoet Q_{meas} aan volgende vergelijking? $Qreq-Tolerance \leq Q_{\text{meas}} \leq Qreq+Tolerance$ met $Qreq = \text{gevraagd setpoint}$ ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **Alle andere kwartieren**: Voer dezelfde controle uit als voor het derde kwartier.	
Penalties	BASF	**3. STEG: assets met een <u>niet-discreet</u> werkingsgebied die <u>wel een curve</u> kunnen lopen** De methode beschreven onder punt 4.1.2 als "the manual service type" gecombineerd met het tweede penalty proposal onder 4.2.2 is voor deze assets ontoereikend. Er wordt hierbij immers geen/onvoldoende rekening gehouden met het feit of setpoints al dan niet correct zijn uitgevoerd. <u>In het geval de activatie volledig binnen 1 kwartier valt</u> **1e kwartier**: Setpoint controle → Activatie binnen de 5 minuten uitgevoerd? ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **2e kwartier**: Wordt het verwachte reactief vermogen (Qreq) geleverd/verbruikt? In het geval van assets met een <u>niet-discreet</u> werkingsgebied die <u>wel een curve</u> kunnen lopen, verwachten we een reactief vermogen op basis van de te volgen curve (beschreven onder 4.2.1 'the automatic service type") met een tolerantie (beschreven onder 4.1.2 "The manual service type"). Er moet echter wel eerst gecontroleerd worden of het setpoint überhaupt gehaald is en pas vervolgens of de curve correct gevolgd wordt. Het heeft immers geen zin te controleren of de curve correct is gevolgd (en hiervoor te vergoeden) als het gevraagde setpoint niet correct is uitgevoerd. Dit kan op volgende manier uitgevoerd worden.	Elia understands the point from BASF to move the calibration of Vstartup to the QH after the manual setpoint was achieved. However, Elia decides to not change the design for the following reasons: 1. If there is a technical issue on the Technical Unit which explains why the setpoint could not be reached on time, a penalty will not be incurred. In this case the VSP should contact Elia. 2. The situation will only present itself in case the market party does not deliver the service correctly. 3. Since the recalibration of the setpoint is done using the average values of the following quarter hour (or the quarter hour thereafter if the setpoint request spanned two quarter hours), the impact will be very limited (the reaction time of the VSP to the manual setpoint would need to be slower than 15 minutes).

		Voldoet Q_{meas} aan volgende vergelijking? $Qreq-Tolerance \leq Q_{\text{meas}} \leq Qreq+Tolerance$ Met $Qreq =$ gevraagd setpoint (zolang de activatie **niet** is uitgevoerd) Met $\text{Qreq} = \frac{-\alpha_{eq}*(GV\ (t)-V_{startup})*0,45*P_{tech,max}}{U_{norm_{expl}}} +$ Qinitial (Van zodra de activatie **wel** is uitgevoerd) Er moet derhalve steeds eerst gecontroleerd worden of het gevraagde setpoint is uitgevoerd alvorens de foto van de situatie genomen mag worden waar de curve op toegepast moet worden. In het voorstel van Elia worden Vstartum en Qinitial steeds gereset in het kwartier volgend op het kwartier waarin de manuele referentiewaarde verzocht werd, zonder rekening meer te houden met de uitgevoerde stap. Als de manuele en de automatische dienst gecombineerd worden, mogen deze parameters pas gereset worden in het kwartier volgend op het kwartier waarin de activatie effectief is uitgevoerd en niet in het kwartier volgend op het kwartier waarin de referentiewaarde verzocht is geweest. ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **Alle andere kwartieren**: Voer dezelfde controle uit als voor het tweede kwartier. <u>In het geval de activatie 2 kwartieren overbrugt</u> **1e kwartier**: Niet mee in rekening nemen. **2e kwartier**: Setpoint controle → Activatie binnen de 5 minuten uitgevoerd? ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **3e kwartier**: Wordt het verwachte reactief vermogen (Qreq) geleverd/verbruikt?	4. The propagation of the error should stop within a limited timeframe. When a new set-point request is sent or 00:00 is passed, a new calibration will be done. 5. This creates an additional (large) complexity for the implementation and would further reduce the comprehensibility of the design. The cost to implement this would be higher than the added value.

		In het geval van assets met een niet-discreet werkingsgebied die wel een curve kunnen lopen verwachten we een reactief vermogen op basis van de te volgen curve (beschreven onder 4.2.1 'the automatic service type") met een tolerantie (beschreven onder 4.1.2 "The manual service type"). Er moet echter wel eerst gecontroleerd worden of het setpoint überhaupt gehaald is en pas vervolgens of de curve correct gevolgd wordt. Het heeft immers geen zin te controleren of de curve correct is gevolgd (en hiervoor te vergoeden) als het gevraagde setpoint niet correct is uitgevoerd. Dit kan op volgende manier uitgevoerd worden. Voldoet Q_{meas} aan volgende vergelijking? $Qreq - Tolerance \leq Q_{\text{meas}} \leq Qreq + Tolerance$ Met $Qreq =$ gevraagd setpoint (zolang de activatie **niet** is uitgevoerd) Met $Qreq = \frac{-\alpha_{eq} * (GV(t) - V_{startup}) * 0{,}45 * P_{tech,max}}{U_{norm_{expl}}} +$ Qinitial (Van zodra de activatie **wel** is uitgevoerd) Er moet derhalve steeds eerst gecontroleerd worden of het gevraagde setpoint is uitgevoerd alvorens de foto van de situatie genomen mag worden waar de curve op toegepast moet worden. In het voorstel van Elia worden Vstartum en Qinitial steeds gereset in het kwartier volgend op het kwartier waarin de manuele referentiewaarde verzocht werd, zonder rekening meer te houden met de uitgevoerde step. Als de manuele en de automatische dienst gecombineerd worden, mogen deze parameters pas gereset worden in het kwartier volgend op het kwartier waarin de activatie effectief is uitgevoerd en niet in het kwartier volgend op het kwartier waarin de referentiewaarde verzocht is geweest. ➔ Ja: gelukt kwartier ➔ Nee: gefaald kwartier → Hoeveel reactief vermogen is er te veel/weinig geleverd/verbruikt? Op basis van deze afwijking kan de penalty voor dit kwartier berekend worden. **Alle andere kwartieren**: Voer dezelfde controle uit als voor het derde kwartier.	

Communica-tion	BASF	BASF ondersteunt het voorstel om over te gaan naar een communicatiesysteem waarin meer informatie gedeeld kan worden. Op dit moment delen wij extra informatie in verband met de VSP-dienst via de rechtstreekse communicatie tussen BASF en Elia. Het is beter dit allemaal via dezelfde loopweg te doen. Wel verwachten we voldoende tijd en ondersteuning om de om-bouw mogelijk te kunnen maken.	Elia is happy that BASF supports the proposal and confirms (as reflected in the implementation plan) that sufficient time and support will be foreseen for the implementation.
MVAr needs map	BASF	Onder “indication of the need for the MVAr service” hebben jullie het over “A map up to 30kV”.Betekent dat boven of onder 30kV? De bewoording is niet duidelijk.	Elia confirms that this means above 30 kV.
MVAr tariff		BASF gaat niet akkoord met de voorgestelde nieuwe toegangspuntband voor het MVAr tarief (sectie 4.8.2) en blijft bij haar standpunt dat er een strikte scheiding nodig is tussen de VSP en het toegangspunt. Het nieuwe ontwerp is volgens ons niet voldoende uitgedacht, biedt geen oplossing voor de reeds eerder aangehaalde issues (in het bijzonder de noodzakelijke strikte scheiding tussen VSP en het toegangspunt) en leidt bovendien onmiddellijk tot nieuwe proble-men: • De nieuwe toegangspuntband wordt toegepast op de maandpiek van de lopende maand. Aan het begin van de maand is de nieuwe toegangspuntband waarbinnen gebleven dient te worden dus nog niet gekend. Hoe moeten wij op basis van een on-gekende nieuwe toegangspuntband ons net opereren en voorschriften opstellen voor de netgebruikers? • Als de site voor een hele maand evenveel verbruikt als de STEG op onze site levert, zal de netto afname/injectiepiek voor die maand 0MW zijn. Wat leidt tot geen nieuwe toegangspuntband en dus geen (of een heel beperkte hoeveelheid) reactief vermogen dat afgenomen/geïnjecteerd mag worden in het Elia net zonder boete. In deze situatie kan aan de STEG op onze site worden opgelegd om het reactief ver-mogen van de site te compenseren (= overbekrachtigd opereren). Maar de STEG zal daardoor in de praktijk niet kunnen deelnemen aan de VSP dienst. Het verlenen van de VSP-dienst levert immers slechts een beperkte vergoeding op die volstrekt niet in verhouding staat tot de boetes op het toegangspunt wanneer buiten de toegangspunt-band getreden wordt. Economisch gezien zou het dus beter zijn om niet deel te ne-men...	Elia understands the comment from BASF, but cannot change this via the MVAr service since this regards the MVAr tariff. Elia will follow decision (B)658E/85 of the CREG on the tariff file but will consider amending this in the next tariff proposal.

MVAr tariff	BASF	Hoe wordt deze nieuwe toegangspuntband gekoppeld aan de VSP dienst? Niet, zoals onze wens is, of op basis van de VSP tolerantieband? BASF is in het verleden nooit akkoord gegaan met deze tolerantieband en zal dit in de toekomst ook nooit doen. Wij kunnen aan de hand van voorbeelden aantonen dat het gebruik van de tolerantieband niet geschikt is voor het beoogde doel.	This point also regards the MVAr tariff. Elia will follow decision (B)658E/85 of the CREG in the tariff file but will consider amending this.
Communication	BASF	Hoe wordt “Zerotage communicatie” (sectie 4.3) opgenomen in dit nieuwe bandenconcept?	Assets that are not actively delivering the service (below the Pmin) can be sent a zero setpoint if they are not starting up or shutting down.

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 finalise its note on voltage service and reactive power control review and recommendations for design optimisations.

This note will be sent to the CREG on the 23rd of the December and published on the Elia website.

6. Attachments

The reactions Elia received to the document submitted for consultation:

- BASF;
- BOP;
- FEBEG;
- Febeliec.

Contact

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