



Report on “public consultation of new aFRR design”

Public Consultation held between 03/09/2018 – 30/09/2018

Market Development

31/10/2018

TABLE OF CONTENTS

Table of Contents	2
Introduction	3
<u>PART 1: Generic aFRR design</u>	5
1. General remarks.....	5
2. Key changes in the aFRR design	9
3. Qualification process.....	17
4. Capacity tender	21
5. Secondary market.....	27
6. Bidding process.....	28
7. Activation in EMS.....	32
8. Control and settlement of balancing energy	33
9. Availability check.....	35
<u>PART 2: aFRR design with Transfer of Energy (“ToE”)</u>	37

INTRODUCTION

The aim of the consultation of the new aFRR design was to receive feedback of the stakeholders on the proposed design. The consultation was launched on the 3rd of September 2018 and ended on the 30th of September 2018. The consulted document can be found on the website of [Elia](#).

In the design note on the new aFRR design, several modifications compared to today's design have been proposed: the implementation of a merit order activation, rules enabling portfolio bidding and other new features that facilitate the opening of the aFRR market to all technologies, independent on the voltage level and the type of aFRR provider (BRP/BSP).

The design note is composed out of two parts. The first part describes the future product design of the aFRR product, i.e. the procedures for the submission of capacity and energy bids, the selection of capacity and energy bids, the activation procedure, the checks and financial settlement of capacity and energy. In the second part, the design note with respect to the extension of the Transfer of Energy mechanism to the aFRR market is presented. In this consultation document, the same structure is applied.

Elia has received feedback on the design note from the following stakeholders:

- ACTILITY
- DSOs
- FEBEG
- FEBELIEC
- RESTORE
- NEXT KRAFTWERKE
- A confidential contribution

This consultation report consolidates the received feedback of the stakeholders. Most of the received inputs are requests for clarification or require small adaptations to the design note. Elia has however made 2 important changes in the design note following the feedback received during the consultation.

First, Elia will consider also the possibility to apply the weighted average price of activated aFRR bids next to the marginal price for mFRR for the determination of the marginal imbalance price. Initially we proposed to consider the marginal price of aFRR bids, which were activated for a minimum duration. A final proposal shall be made in the course of 2019 also considering the choices made in the framework of the development of the regional exchange of aFRR.

Secondly, we have changed our proposal regarding the design of the capacity tender. Our initial proposal was to procure aFRR balancing capacity via 6 blocks of 4 hours. This proposal was however not optimal for assets with large start-up costs. When those assets would need to be started up for the delivery of aFRR, there is a risk that for each separate 4-hour block, a start-up cost need to be included in the capacity bids. On top of that, it is for some technologies not obvious to offer for a 4-hour block due to technical constraints. This topic needs however to be further reviewed and consulted with the stakeholders. Therefore, Elia will elaborate on this topic further in the proposition of the implementation plan.

Finally, part II of this report summarizes the feedback for aspects related to Transfer of Energy (hereafter called "ToE"). Market players support the implementation of ToE for aFRR, however Elia did not receive any feedback on the provided questionnaire. Therefore, at this

moment in time, Elia has no view on the additional assets or volumes that would be offered thanks to a ToE-mechanism for aFRR.

Next, stakeholders indicate that the exclusion of net-injection in the current ToE-framework is discriminatory against generation technologies and is a major concern in the context of aFRR. Finally, stakeholders propose alternative solutions to facilitate the market access for pass-through contract holders.

In the following steps, Elia will organize a consultation of the implementation plan in November 2018. As has been done for the design note, Elia will also further coordinate with DSOs for the relevant topics.

PART 1: Generic aFRR design

1. General remarks

In this section, the general remarks received on the consultation note are grouped together.

Stakeholder	Feedback of Stakeholder
<p>FEPEG (major concern)</p>	<p>A cost-benefit-analysis demonstrating the increased social welfare of the new aFRR design is missing</p> <p>FEPEG understands the objective of Elia to open the aFRR product to non-CIPU units and units connected to the distribution grid. Nevertheless FEPEG wonders whether the costs to implement this new aFRR design – at Elia side but also at the side of the existing and new aFRR providers – are justified by the expected benefits. Two pilot projects have demonstrated the technical possibility, but also the difficulties. Therefore, FEPEG pleads again for a more thorough cost-benefit-analysis: the potential aFRR volume should be carefully assessed together with the reservation costs and activation costs linked to these new resources.</p> <p>Indeed, as Elia explains in the introduction of the document, aFRR can be considered as the most complex balancing product Elia is contracting. The reason is that aFRR implies a high activation frequency as well as large amounts of activated energy and that it requires a continuous automatic signal. Larger flexible power plants – typically CCGT's - are by nature very well suited to respond to these requirements for aFRR. Therefore FEPEG regrets that the proposed market design is making it considerably more difficult for CCGT's to offer their capacity in an efficient and economically optimal manner, which will lead - at least in the short term - to increased costs for the procurement of this service.</p> <p>Although FEPEG is supportive of opening the market to other technologies, FEPEG has serious doubts about their ability to play an import role. In this respect, FEPEG would like to remind the following elements:</p> <ul style="list-style-type: none"> • One of the merits of providing aFRR with CCGT's is the relatively low price of the balancing energy. As an exponent of this, it can be observed that currently aFRR balancing prices in Belgium are much lower than in neighboring countries. • When assessing the economic efficiency of the market design, it is important to assess the full cost of the aFRR product and thus both capacity and activation cost. • It makes sense to assume that - in terms of energy price - demand flexibility or wind and solar flexibility would be higher in price than a CCGT. In fact, wind generation would need negative activation prices to come to a positive economic outcome.

Answer of ELIA

No modification of the design note

As already described in the design note, the opening of the aFRR market to all technologies, the merit order activation and the evolution to short-term sourcing is imposed by the Guideline on Electricity Balancing. Since it is a legal obligation, the outcome of a cost-benefit analysis would not affect the decision whether these features need to be included in the new design or not.

Elia however understands Febeg's concern that the proposed design should still allow for CCGTs to bid in their capacity in an efficient and economically optimal manner (see also Section 6).

Stakeholder	Feedback of Stakeholder
FEBELIEC	<p>Elia mentions in many cases DSOs and only sometimes CDSOs explicitly. For clarity reasons and readability, it would be advisable to update the design note to always reflect the point whether or not DSOs also include CDSOs, as the European Network Codes make no distinction nor does the latest draft version of the Clean Energy Package. As a result, it is not always clear when to read DSO as only public DSOs or also including CDSOs, knowing that in some (particular) cases there is a different design proposed. For example, but not limited, to:</p> <ul style="list-style-type: none"> ○ Section 4.5: "<i>connected to both the distribution or transmission grid</i>" → Also including CDS? ○ Section 4.5.1: "<i>DSO measurements</i>" → Also referring to CDSO measurements? ○ Section 5.3.: "<i>DSO if applicable</i>", "<i>TSO or DSO connected</i>" → Also including CDSO? ○ Section 5.3.5: "<i>The aFRR provider contacts the DSO (if DSO connected)</i>" → Also including CDSO?

Answer ELIA

Clarified in the design note

Elia has clarified in the design note where CDSO points are included. Amongst others things, the sections mentioned in the feedback of FEBELIEC are updated.

Stakeholder	Feedback of Stakeholder
DSOs	<p>Cadre légal et rôle FDM des GRD Le décret wallon relatif à l'organisation du marché de l'électricité prévoit dans son article 35sexies §1er « <i>Dans le respect de la protection de la vie privée, les gestionnaires de réseaux sont chargés, pour ce qui concerne la valorisation de la flexibilité entraînant un transfert d'énergie ou dans le cadre d'un produit régulé d'un gestionnaire de réseau ou du gestionnaire du réseau de transport le nécessitant de collecter, vérifier, traiter et transmettre les informations nécessaires au calcul du volume de flexibilité en s'accordant avec le gestionnaire du réseau de transport.</i> ». En application de ce décret, les GRD Wallons en déduisent que les GRD Wallons ont un rôle à jouer dans la mise en oeuvre de aFRR.</p>

	<p>L'ordonnance bruxelloise publiée au Moniteur le 20 septembre 2018 précise, en son article 26bis : « La flexibilité utilisée dans les marchés organisés respecte les principes suivants : (...) 3° le gestionnaire du réseau de distribution gère les données de comptage pour la valorisation de la flexibilité de la demande du client final ». Sibelga a donc, en vertu de cette ordonnance, également un rôle à jouer dans la mise en oeuvre de aFRR.</p> <p>Ongeacht het ontbreken van een regelgevend kader in Vlaanderen waar de rol van flexibiliteit-data-manager specifiek wordt toegewezen aan de distributienetbeheerders nemen deze laatste deze rol al volwaardig op. Immers hebben de DNB's op vandaag al de rol van metering in het kader van toewijzing van energiepakketten aan marktpartijen. In het kader van hun decretale rol als distributienetbeheerder en in uitvoering van de federale regelgeving daartoe hebben de DNB's, gelet op het feit dat dit een product betreft met ToE, een belangrijke rol te spelen in het faciliteren van de marktwerking voor netgebruikers marktpartijen die deelnemen aan het product aFRR , dit zowel op het vlak van metering (ook op achterliggende punten, i.e. submetering), data acquisitie en settlement.</p> <p>De manière générale, il serait plus clair de séparer les rôles de FDM, responsable du déséquilibre et FRP étant donné que le GRD est également FDM et pourrait également être FRP.</p>
<p>NEXT KRAFTWERKE</p>	<p>Discussion with the DSOs</p> <p>Several non-CIPU products developed by Elia were in a first stage only accessible for TSO connected delivery points and only later for delivery points on DSO level. In our opinion, this discriminates flexibility on DSO level.</p> <p>In the design note it remains unclear in how far the DSOs are involved in the discussion and the implementation process and how it will be guaranteed that both DSO and TSO level delivery points can enter the R2 market at the same time. We would therefore ask Elia to engage in early discussions with the DSOs and organize the time line accordingly to ensure a level playing field for all market parties.</p>
<p>Answer of ELIA</p>	
<p>The roles & responsibilities will be agreed between the DSOs and TSO taking into account relevant legislation.</p> <p>Elia recognizes the concern of Next Kraftwerke. Elia has engaged in an early stage the DSOs for discussing the new design. Elia has the ambition to open up the market for DSO and TSO connected delivery points on the same time when feasible for Elia and the DSOs. More information will be given in the implementation plan that will be consulted in November.</p>	

Stakeholder	Feedback of Stakeholder
<p>NEXT KRAFTWERKE</p>	<p>Security of Implementation</p> <p>In chapter 6.3 on page 41 it is stated that the go-live for the R2 non-CIPU is scheduled for beginning of 2020. At the same time a list of condition for keeping this date is given (as e.g. a good development of FCR market, the lesser use of asymmetric FCR product, the possibility to cost efficiently source FCR and aFRR separately...)</p> <p>We would like to point out that for any investment in R2 by an aggregator it is very important that there is a high level of certainty that the R2 non-CIPU product will be developed, that it will be developed with high priority and that a strong effort will be made to keep the suggested timeline.</p>
<p>Answer of ELIA</p>	
<p>This will be part of the proposition for an implementation plan.</p>	

2. Key changes in the aFRR design

In this chapter, the feedback on the key changes in the aFRR design is described. More in detail, feedback is received on following topics:

- Baseline methodology
- Metering configuration and accuracy
- Real-time data-exchange
- Ex-post data-exchange
- The configuration of measurement and communication chain
- Metering and submetering.
- The combination of aFRR and mFRR

Stakeholder	Feedback of Stakeholder on baseline methodology
FEPEG (specific comments and suggestions)	<p>Communication of baseline (§4.2)</p> <p>FEPEG wants to express its concerns with regard to the new baseline approach for aFRR: an aFRR provider will have to send the baseline which is expected one minute later each 4 seconds. Several operators use their power plants for continuous optimization, meaning that they use the remaining flexibility on the power plants to balance their positions. For this reason, it is extremely difficult for such operators to send a correct baseline 1 minute in advance and, on top that, the methodology risks to kill the within quarter hour flexibility between Pmax-reserves and Pmin+reserves that is currently optimized within the quarter hour. Power plants operators therefore risk to be confronted with significant opportunity losses.</p> <p>FEPEG also has a question with regard to the baseline methodology: can Elia confirm that the BSP must only send the baseline delivery points submitted on the bidding platform?</p>
RESTORE	<p>Baseline concept for aFRR</p> <p>REstore fully supports Elia’s proposal to implement a baseline based on a 1-min ahead forecast sent by the BSP every 4 seconds. We believe this will be a key enabler to allow for an efficient settlement of the aFRR volumes delivered by assets than be very volatile (such as Demand Response or wind farms), allowing to set a clean baseline.</p> <p>At this stage, REstore however requests from Elia an additional delay to further analyze the concrete requirements associated to this baseline proposal. We fully support that quality checks should be implemented to ensure the baseline provided is of sufficient quality, but need further analysis to assess the proposed criteria regarding:</p>

	<ul style="list-style-type: none"> • The 1-min ahead value proposed: This proposal does contribute to offer a workable framework, but closer to real-time value (e.g. 30 sec) might bring some valuable additional certainty to the forecast, while still avoiding gaming opportunities. • The check criteria proposed by Elia (Relative Root Mean Square Error with respect to the average daily baseline < 5%, with 2% outliers excluded) also seems as an efficient proposal for the needed control of the baseline quality. However, further analysis are also needed to ensure these are workable criteria. Also, we believe the Test should be long enough to provide a number of Samples sufficiently large to have a relevant root mean square analysis, and will run further analysis to propose some durations.
<p>Next Kraftwerke</p>	<p>Baseline Evaluation Based on Non-Participating Units</p> <p>The baseline is evaluated on the pool of non-participating units (s. Article 14 in design note). We understand the reasoning for the approach, but also see an important issue:</p> <ul style="list-style-type: none"> • The R2 activation will be executed by the “participating DPs”. A provider selects those delivery points which are available, which are connected, react and can follow the set-point. • An aggregator must keep a redundancy in case he “loses” some of the participating unit due to an outage or a loss of connection. In that case he can switch non-participating units to become active in the participating pool. This also means that the “non-participating” units are not necessarily unavailable neither do they not necessarily not react. • However, the non-participating pool typically hosts also those units with connection losses or outages. Therefore, the baseline of the non-participating pool is not as accurate as the one for the participating units. While the accuracy of the baseline for the non-participating delivery points might be worse for instance due to units starting or having an outage. • In case the activations are rather small and only a part of the offered R2 volume is activated this effect will be limited, but as soon as a large volume of R2 is activated the aggregator typically activates to a large extent those units that are reliable at those moments and switches these to the participating pool. In such case the non-participating pool still hosts the redundant units, but the share of units that are not available, that have lost connection or that ramp up or down due to start-ups and outages will be larger. In particular the outage and start-up ramps are more difficult to forecast and will have a significant impact on the accuracy of the baseline. In these cases, the less reliable or not connected units might dominate the baseline error.

	<p>We therefore propose that Elia carefully evaluates this problem. It might be a solution to exclude the times of high R2 activations from the base line evaluation if a strong distortion can be observed.</p>
<p>Answer of ELIA</p>	
<p>Elia is convinced that sending the baseline one minute in advance is a good balance between being able to forecast the baseline in an accurate way and reducing the gaming possibilities by anticipating on the set point sent by Elia. The one minute in advance baseline is very close to real-time and therefore Elia thinks that the “one minute in advance baseline” gives sufficient opportunities to perform real-time optimizations. This baseline methodology was also tested during the R2 non-CIPU pilot project with positive results.</p> <p>The proposed quality target, as described in the design note, has been evaluated based on the data of the R2 non-CIPU pilot project. This analysis showed that the proposed quality target is feasible for all participants. Therefore, Elia is convinced that this 5% is a realistic value to start with. 2% of the outliers are excluded and this should also include the outages and loss of connection of units.</p> <p>All data, including the baseline, should be sent for all delivery points. However, only the units nominated on the bidding platform are taken into account for the activation control and the baseline check.</p> <p><u>Adaptation added to the design note</u></p> <p>Since the baseline test is a complete new process, Elia will re-evaluate the methodology one year after the go-live once sufficient data for doing the analysis is available. Elia will discuss the results of this analysis with relevant stakeholders.</p>	

Stakeholder	Feedback of Stakeholder on Metering configuration and accuracy
FEBELIEC	With respect to metering configuration and accuracy (4.3), Febeliec is very pleased that Elia has taken into consideration and account the comments that were provided and has adapted its design accordingly.
DSOs	<p>La prescription suivante ne nous semble pas réaliste pour les URD : « <i>The measurement equipment needs to have a precision of 1% or better for the whole measurement chain (current and voltage transformers, measurement equipment), or a maximum precision margin of 100kW</i> »</p> <p>Notons enfin la référence à des données 2” plutôt que 4” dans la phrase : « <i>Elia requires power measurements with a maximum resolution of 2” to verify the offered service.</i> ».</p>
NEXT KRAFTWERKE	Page 13, Article 4.3, 1 st paragraph: Data availability of 95% is requested here. It would be good to clarify, which data this refers to (real-time?), what time horizon is looked at (1 d, 1m, 1a) and what would be the consequences if the availability falls below 95%?
NEXT KRAFWERKE (minor remark)	Page 12, Article 4.3, 2nd paragraph: We think that this should be “...; and a maximum precision...”

Answer of ELIA

The requirements for the aFRR measurement equipment are in line with the existing requirements for the FCR measurement equipment. For the resolution of the real-time measurement, it is logical to ask a higher resolution (maximum of 2") than the frequency on which the data is exchanged, i.e. 4" basis.

The data availability of 95% refers to the real-time data and this is a contractual requirement. The consequences of the non-availability of the data are described in the design note for the activation control, the availability test and the consistency check. All checks are performed on a monthly basis.

Adaptation added to the design note:

The measurement equipment needs to have the highest precision of either 1% or better for the whole measurement chain (current and voltage transformers, measurement equipment), or 100kW.

Stakeholder	Feedback of Stakeholder on real-time data-exchange
FEPEG (specific comments and suggestions)	<p>Real-time data exchange (§4.4.2)</p> <p>The settlement of the new aFRR design will be based on 4 seconds data. FEPEG would like to understand what the benefits of shortening the time from 10 to 4 sec for data exchange are as it will increase the stress on the communication systems.</p> <p>FEPEG is also of the opinion that assets for which all parameters have to be exchanged in real-time (CIPU assets or assets with an individual power schedule) should be exempted of the supplementary data exchange of aggregated values. This applies all the more for BSP's who have only CIPU assets in their portfolio.</p>
FEBELIEC	<p>With respect to point 4.4.2, Febeliec wonders whether not participation to the aFRR service means that no service was offered or also when the service was offered but zero volume was contracted/activated. It would bring additional clarity if this point would be specified a bit more clear.</p>

Answer of of ELIA

No modification in the design note:

Elia is convinced that if all data is sent each 4 seconds, it is logical to perform the aFRR settlement also on a 4" basis in order to be coherent. According to Elia, this will make the settlement more transparent.

The aggregation of the data for CIPU and non-CIPU is always required, also in case the BSP has only CIPU units since Elia wants to have an overview of the aFRR services per BSP. For the aggregation of data, the same rules apply to BSP with and without non-CIPU assets in their portfolio.

In section 4.4.2, Elia refers to non-participating units as units which are submitted to a bid on the bidding platform but which are not delivering the aFRR service during the concerned 4" timestamp. When a BSP does not activate a certain delivery point for the

aFRR services during the concerned 4 seconds timestamp, this delivery point should be attributed to the non-participating pool.

Stakeholder	Feedback of Stakeholder on ex-post data-exchange
DSOs	<p>Technologie</p> <p>Lors des échanges préparatoires avec Elia, une seconde option a été proposée. De type « décentralisée », elle permet de rapatrier, en J+1, les données individuelles directement vers une plateforme GR centrale. L'objectif principal, par rapport à une solution de type client-BSP-plateforme GR, est de sécuriser le rapatriement des données et d'ainsi réduire les coûts liés à la validation des données 4". Cette solution permet également au BSP de proposer des valeurs de remplacement le cas échéant. Dans une optique de simplification et de réduction des coûts, les GRD plaident pour une approche unique sur toute la chaîne de données. Les éléments ci-dessus permettent de préciser la phrase suivante de la design note Elia : <i>"Installation of a data logger at the level of the delivery point: the mandatory installation of a DSO-owned data-logger for DSO delivery points at the level of the delivery point. This centralized architecture provides ex-post (or possibly close to real-time) all 4 second data directly from the delivery point. This is realized by having a data logger that captures and logs all relevant parameters, which then can be directly consulted by the system operator."</i></p> <p>Lors des récentes rencontres ELIA-GRD au sein de Synergrid, il est apparu que l'utilisation de nouvelles technologies, plus spécifiquement celle de l'Internet de l'Energie (encore en phase de tests) pourrait être particulièrement intéressante dans le cadre du développement de ce service. Pour les questions de timing déjà évoqués en introduction, cette piste n'a pas pu être reprise dans le note de design. Ces réflexions doivent se poursuivre afin de vérifier si cette technologie peut offrir une solution efficace au niveau technico-économique, qui respecte les attentes du marché et les cadres légaux et réglementaires auxquels sont soumis les différents gestionnaires de réseau.</p> <p>Le choix de la solution et donc du design du service est un élément clé. D'une part pour s'assurer qu'aucun coût de maintenance ou opérationnel majeur ne soit sous-évalué. D'autre part, parce que, une fois un choix posé (technologie standard ou nouvelle), il sera difficile de faire marche arrière.</p> <p>Les GRD indiquent que le système global devra être développé de manière à le rendre compatible avec d'autres fonctionnalités liées aux activations de flexibilité pour des besoins futurs en distribution. Il devra ainsi être possible d'activer (ou interdire) de la flexibilité afin de garantir la qualité, la fiabilité, la disponibilité et la sécurité opérationnelle des réseaux de distribution à tout moment. Il importe dès lors de développer les processus et les flux d'information compatibles avec par exemple un système dynamique de trafic lights.</p>

Si les GRD et ELIA ont démontré avec le DataHub qu'il était possible de développer rapidement une nouvelle plateforme efficace, les enjeux pour aFRR (qui est le service de balancing le plus utilisé et à la plus forte valeur) ne sont clairement pas du même ordre. Dès lors, et tout en rappelant la volonté des GRD de contribuer activement à son développement en étant à l'écoute des attentes du marché, il nous semble que la planning d'une mise en activité au 1er janvier 2020 comme annoncé au chapitre 6.3 de la design note est très optimiste. Les GRD plaident dès lors pour une approche commune pour ce projet dans laquelle le planning et l'implémentation sont mis au point avec tous les acteurs.

Answer of ELIA

Adaptation to the design note

Elia and the DSO's discussed the identified options for the collection of 4 second measurement data from non-CIPU units and are working closely together towards a hybrid solution :

- Privately owned device by the BSP
- Minimal technical requirements set by Elia and the DSO (accuracy, gateway connection,...)
- Live connection between non-CIPU delivery point and a cloud-based platform
- Minimal entry barrier for the BSP

This alternative implementation will be elaborated in the implementation plan.

Stakeholder	Feedback of Stakeholder on ex-post data exchange
FEBELIEC	With respect to point 4.5.2, Febeliec is very pleased that Elia has taken into consideration and account the comments on ex-post data exchange that were provided and has adapted its design accordingly.
NEXT KRAFTWERKE	<p>Ex-post data</p> <p>The design note explains that there so far it is still unclear how the aggregator shall transmit the metering data of each delivery point to Elia.</p> <p>Next Kraftwerke would like to highlight that it is preferable to keep the ex-post data exchange scalable. This could be achieved by e.g. removing the need to send every 4-second value for every delivery point but working with virtual delivery points.</p>

Answer of ELIA

No modification in the design note:

An aggregation by the BSP is not allowed since it is the asset that should be able to send all individual data to Elia for non-CIPU assets via the cloud-based platform. Therefore, Elia request unit based data on a 4 seconds basis.

Stakeholder	Feedback of Stakeholder on the configuration of measurement and communication chain
FEPEG (specific comments and suggestions)	Communication chain (§4.5.1) FEBEG has a questions with regard to a RTU of Elia: how can the BSP be responsible for the communication of the power measures by this RTU to the SCADA of Elia?
Answer of ELIA	
Clarification in the design note: Elia accepts this comment and will do an update of the design note. Elia is responsible for the real-time communication between the RTU owned by Elia and the SCADA of Elia.	

Stakeholder	Feedback of Stakeholder on metering and sub-metering
FEPEG (specific comments and suggestions)	Metering and submetering (§4.5) FEBEG agrees with the principle of metering at the same level for delivery points, allowing submetering without hierarchy. To this effect no distinction between CIPU and Non-CIPU delivery points should exist : submetering should also be allowed for a CIPU delivery point.
Answer of ELIA	
When an RTU owned by Elia is available, Elia will use the measurements of the RTU. This approach is aligned with the current FCR design.	

Stakeholder	Feedback of Stakeholder on the combination of aFRR and mFRR
FEBELIEC	With respect to section 4.6, Febeliec is still disappointed that it will not be possible to offer aFRR and mFRR from a same delivery point. Febeliec hopes that Elia will in the very near future investigate the settlement rules needed to allow a combination of both products and come with a proposal that could solve this issue, in order to avoid that market actors have to arbitrate between both products (or not being able to valorise all the potential on a same delivery point, also with volumes not able to fulfil the aFRR product requirements but which could fulfil mFRR requirements), thus reducing liquidity and competition by this additional market entry barrier. Febeliec would like to request Elia to provide a clear timeline on when such analysis would be performed and when such combination could be implemented, preferably as soon as possible.
Answer of ELIA	
Elia reminds that in the design proposal, the same delivery point can be prequalified for aFRR and mFRR and that for aFRR a pool based settlement is performed for the availability and activation control.	

Moreover, the proposed design foresees a flexible bidding mechanism enabling BSPs to attribute close to real time per quarter-hour delivery points to a product. mFRR and aFRR on the same delivery points for the bidding process is allowed but not during the same quarter-hour, unless unit based bidding is applied (for CIPU and non-CIPU). Allowing a combined delivery (aFRR/mFRR) for portfolio bids means a large and complex implementation with impact on timing and cost whereas the added value cannot be demonstrated at this moment.

3. Qualification process

In this chapter, the received feedback on the following topics that are part of the qualification process are described:

- Process of the prequalification
- On the pool registration and off-line checks
- On the availability requirement
- On the detailed information on the providing groups

Stakeholder	Feedback of Stakeholder on the process of the prequalification
DSOs	<p>Processus de qualification</p> <p>Les GRD constatent que le processus de qualification repris dans la note d'ELIA à son chapitre 5 introduit une confusion entre « préqualification » et « qualification » et ne parle que des articles 158 et 159 du System Operation Guideline (en omettant les articles 182 du même règlement et ceux du Demand Connection Code (DCC)). Or ces articles sont indispensables pour bien comprendre l'ensemble des implications de l'ouverture de ce marché à des points raccordés au réseau de distribution.</p> <p>En substance, l'article 182 prévoit à son paragraphe 1 la coopération obligatoire avec les GRD, tandis que le paragraphe 3 stipule que l'établissement des informations à échanger entre les unités ou groupe fournissant le service doit être repris dans un accord avec le GRD. La mise en oeuvre de ces dispositions devra faire l'objet de discussions avec ELIA. Il est également à noter que le System Operation Guideline prévoit toujours à l'article 182 (§4) que le GRD a le droit de fixer des limites (temporaires ou non) applicables à la livraison des réserves de puissance active situées dans son réseau de distribution, ou d'exclure cette livraison (sur base d'un processus de préqualification). Ce même article prévoit que le processus de préqualification peut durer maximum trois mois.</p> <p>Il nous semble donc important de préciser que, étant donné que l'énergie activée pour ce service peut s'entendre sur plusieurs 1/4h, les GRD estiment qu'une étude réseau (NFS) est indispensable. Nous notons par ailleurs que cette notion de NFS est bien reprise dans les définitions mais pas dans le processus (point 5.3 de la note de Design). Dans ce cadre, il est souhaitable, pour la distribution, de limiter l'accès au marché aFRR aux clients équipés d'un compteur 15' et raccordés en moyenne tension.</p> <p>Un cadre général concernant le processus de préqualification est donc nécessaire. A ce stade, aucune position n'existe pour des situations exceptionnelles pour lesquelles le GRD aurait besoin d'interdire ou limiter une activation sur base d'informations disponible proche du temps réel. Ces situations exceptionnelles, dans le cadre de la sécurité opérationnelle, le maintien de la qualité et la fiabilité du réseau de distribution ne devraient par ailleurs jamais conduire au droit à une</p>

	<p>compensation pour le client final, le FRP, le FSP ou toute personne intermédiaire.</p> <p>En ce qui concerne le Demand Connection Code, nous comprenons que les installations participant à aFRR rentrent dans la catégorie de service contrôlable à distance: « i) réglage de la puissance active par la participation active de la demande ». Dès lors, la procédure proposée par ELIA devra contenir des modalités relatives à l'établissement du DRUD (dossier technique pour unité avec participation active de la demande) et au responsable de sa vérification (voir article 33 du DCC). Il est dès lors souhaitable que le GRD puisse imposer des prescriptions aux équipements de réglage et à leur utilisation.</p>
--	--

Answer of ELIA

Elia reminds the DSOs that DCC is only applicable to:

- new transmission-connected demand facilities;
- new transmission-connected distribution facilities;
- new distribution systems, including new closed distribution systems;
- new demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs

Hence, the development of modalities (DRUD) is no precondition for the remaining part of the delivery points.

Adaptation to the design note

The participation of a DSO connected delivery point to the aFRR service is preconditioned by a positive outcome of the NFS study. The modalities of this NFS study as well as this condition for eligibility for participation of DSO connected delivery points will be described in the FSP-DSO contract.

Article 182 of the Guideline on Electricity balancing, describing the cooperation between the TSO and the DSO and the modalities for reserve providing groups connected to the distribution system, is added to the design note. Elia has clarified also in the design note that the participation of a DSO connected delivery point to the aFRR service is preconditioned by a positive outcome of the NFS study. Elia is already coordinating with the DSOs with respect to the participation of delivery points connected to the distribution grid.

Stakeholder	Feedback of Stakeholder on the pool registration and off-line checks
RESTORE (additional comment)	<p>Regarding the information to provide on delivery point level detailed on page 27, it is not clear why Elia could not get that information from the EAN code, avoiding implementing the requested process.</p> <p>Same for the max / min offtake at delivery point level, the need for this information is unclear since Elia already has the aFRR max at this granularity.</p>

Answer of ELIA
<p><u>Adaptation to the design note</u> If the information is available from the EAN code, Elia will take this information, otherwise, this information should be provided to Elia.</p>

Stakeholder	Feedback of Stakeholder on the availability requirement
RESTORE	<p>Availability requirement</p> <p>REstore supports Elia proposal not to test the 4-hour energy requirement through a simulation test that would indeed be expensive and lead to important additional costs since such tests are not paid.</p> <p>The information requested to explain how the 4-hour requirement will be ensured should however be sufficiently clear and solid to allow for this alternative.</p> <p>Another option that could be foreseen would be to pay the BSP for the energy delivered during the 4-hour test, so that (i) it demonstrates with higher certainty the ability of the asset to respect the requirement, and (ii) covers the cost associated to the test. We underline that this kind of (at least partially) remunerated test are implemented in other countries (like the French mFRR).</p>
FEBELIEC	<p>On section 5.2, Febeliec is pleased that Elia has taken into consideration and account the comments that were provided on the availability and that Elia has adapted its design to allow for a qualitative approach.</p>

Answer of ELIA
<p><u>No modification in the design note:</u> Elia agrees that the requested information on the 4-hour requirement should be sufficient clear and detailed in order to perform a good evaluation. Doing a test of 4 hours has a too large impact at the side of the stakeholders and at the side of Elia. In. According to Elia, the operational pressure would be too large.</p>

Stakeholder	Feedback of Stakeholder on the detailed information on the providing groups
FEBELIEC	<p>On section 5.4, principle 12, Febeliec is not sure that it understands correctly the impact of the exclusion of points participating in a simulation test to be excluded from delivering aFRR services. During this test, these points are delivering aFRR volumes (if the test is successful). Moreover, Febeliec does not understand how the initial reserve obligation of the BSP will remain valid, if Elia takes out delivery points for testing. Febeliec would like Elia to elaborate more on this point, in order to understand what is actually meant by this principle.</p>

Answer of ELIA
<p>The simulation test mentioned in principle 12 is part of the prequalification test. Elia procures aFRR in order to ensure that a minimum level of regulation quality is achieved when managing the balance of the control area. Delivery points that need to perform a</p>

simulation test aren't available to perform the normal regulation. It is therefore logic that these points cannot be attributed at the same time to a bid submitted to the bidding platform for participating at the aFRR service.

These simulation tests are organized well in advance in order to give the BPS the time to take the necessary measures to fulfill his aFRR obligations or to adapt his bidding strategy for the daily capacity tender.

4. Capacity tender

This chapter summarize the feedback of the stakeholders on the capacity tender for the following topics:

- Daily procurement with blocks of 4 hours
- Asymmetric capacity bidding
- The “one step option”

Stakeholder	Feedback of Stakeholder on blocks of 4 hours
<p>FEPEG (major concern)</p>	<p>Daily procurement with 4 hours blocks (§ 6.2.2.) According to article 32, §2 of the EGBL, the second principle for the procurement of balancing capacity states that ‘the procurement process shall be performed on a short-term basis to the extent possible and where economically efficient’. FEPEG fails to understand how the daily procurement with only 4 hours blocks can be the most economically efficient solution.</p> <p>FEPEG is of the opinion that Elia should perform a sound market potential analysis demonstrating that only 4 hour blocks will lead to a reduction of the total cost of aFRR (capacity and energy), taking into account the following factors:</p> <ul style="list-style-type: none"> • <i>Impact on CCGT’s:</i> The shift to procurement of 4 hour blocks will have a significant impact on CCGT’s. Indeed, except for market situations where it can be expected with a sufficient degree of confidence that CCGT’s will be in the money and thus running, start-up costs will be added in the capacity bids of CCGTs for each 4 hours block. On the contrary, with the current weekly procurement daily start-ups are avoided for the units contracted, reducing the capacity cost. <p>So, one could expect an increase in the capacity costs in the following situations:</p> <ul style="list-style-type: none"> ○ when the capacity needs of aFRR Up and Down cannot be completely fulfilled by the new technologies, and CCGT’s remain thus necessary; ○ when CCGT’s are not necessary to fulfill the capacity needs: will the total cost – in this situation - be lower than when CCGT’s do not have to add start-up costs in each 4 hours block. <p>On top of that, the length of the start-up of some CCGT’s would make it difficult, nearly impossible to continue to offer CCGT’s.</p>

	<ul style="list-style-type: none"> • <i>Shift to daily procurement is main driver for attracting new resources:</i> <p>FEBEG wants to remind the results in the Elia report ‘Study on the evolution towards a daily procurement of mFRR’ of the 22nd of May, 2018 (see table below). This study shows that the main game changer to attract new resources is the shift to daily procurement. The reduction of the delivery period has a smaller impact.</p> <table border="1" data-bbox="480 584 1246 824"> <thead> <tr> <th></th> <th>Product duration / product resolution</th> <th>Base delivery</th> <th>Peak & long-off-peak</th> <th>8h blocks</th> <th>4h blocks</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Onshore wind farm</td> <td>Month</td> <td>0%</td> <td>0%</td> <td>1%</td> <td>1%</td> </tr> <tr> <td>Week</td> <td>2%</td> <td>4%</td> <td>5%</td> <td>8%</td> </tr> <tr> <td>Day</td> <td>25%</td> <td>34%</td> <td>50%</td> <td>65%</td> </tr> <tr> <td rowspan="3">BE aggregated offshore production</td> <td>Month</td> <td>0%</td> <td>1%</td> <td>1%</td> <td>1%</td> </tr> <tr> <td>Week</td> <td>3%</td> <td>6%</td> <td>7%</td> <td>11%</td> </tr> <tr> <td>Day</td> <td>36%</td> <td>47%</td> <td>65%</td> <td>78%</td> </tr> </tbody> </table> <p>If Elia nonetheless choses to stick to the introduction of 4 hour blocks, FEBEG proposes to have a daily procurement of 24 hour products in combination with daily procurement of 4 hour blocks. The introduction of daily procurement with a 24-hour product - baseload product – is a must: it could to a very large extend reduce the start-up costs of CCGT’s and would allow all CCGT’s – taking into account the length of the start-up – to participate.</p> <p>FEBEG believes that this proposal:</p> <ul style="list-style-type: none"> • allows Elia to do global optimization to ensure that aFRR is procured at the lowest cost for society; • respects the principle of technology-neutrality: no technology – nor CCGTs, neither new resources – would be excluded from participation. 		Product duration / product resolution	Base delivery	Peak & long-off-peak	8h blocks	4h blocks	Onshore wind farm	Month	0%	0%	1%	1%	Week	2%	4%	5%	8%	Day	25%	34%	50%	65%	BE aggregated offshore production	Month	0%	1%	1%	1%	Week	3%	6%	7%	11%	Day	36%	47%	65%	78%
	Product duration / product resolution	Base delivery	Peak & long-off-peak	8h blocks	4h blocks																																		
Onshore wind farm	Month	0%	0%	1%	1%																																		
	Week	2%	4%	5%	8%																																		
	Day	25%	34%	50%	65%																																		
BE aggregated offshore production	Month	0%	1%	1%	1%																																		
	Week	3%	6%	7%	11%																																		
	Day	36%	47%	65%	78%																																		
<p>FEBELIEC</p>	<p>On the daily procurement of aFRR with blocks of 4 hours, Febeliec would like to point out that it hopes that this will indeed increase liquidity in the market, and not make it more difficult for a range of assets to participate. Febeliec also hopes that Elia will duly implement operational and organisational elements allowing market parties to provide standing offers already from longer periods in advance, in order to provide as much operational flexibility to market parties as possible to be able to introduce their bids and modify them over time, which will only help participation levels as also smaller market parties will then be able to contribute to the aFRR service.</p>																																						
<p>Answer of ELIA</p>																																							
<p><u>Adaptation to the design note</u> Elia recognizes the concern of FEBEG with respect to the addition of the start-up cost of the CCGTs to each 4-hour block. As a mitigation measure, Elia proposes the following methodology for the capacity tender. 24-hour blocks will also be allowed for the capacity tender. Consequently, Elia proposes to procure the reserved capacity with a combination of 4-hour blocks and 24-hour blocks. A BSP that makes an offer for a 24-hour block is also obliged to split the offer in 4-hour</p>																																							

blocks. Offers for only 4-hour blocks, as initially stated, are still allowed. The bidding obligation of aFRR up and aFRR down remains valid. A total cost optimization will be performed on a 24-hour basis. By applying this methodology, Elia mitigates the risk of the start-up costs but on the same time also incentivize the participation of non-CIPU flexibility by having 4-hour blocks.

However, since this is a significant modification of the methodology for the capacity tender, Elia will include this topic in the proposition for the implementation plan and consult this topic again.

In order to limit the operational and organizational impact, Elia will allow to make standing offers for longer periods.

Stakeholder	Feedback of Stakeholder on asymmetric capacity bidding
Next Kraftwerke	<p>Asymmetric Capacity Bidding</p> <p>The R2 market is currently difficult to enter for new participants. One of the reasons is that R2 is still sourced as a symmetrical product. A new entrant that only offers R2 up or R2 down relies on an offer from another party offering the product part to combine to R2 symmetric.</p> <p>To our understanding the current proposal suggests that all parties offering a symmetrical volume also need to offer this same volume in two asymmetric capacity bids.</p> <p>We consider this obligation of utmost importance for the success of opening the R2 market.</p> <p>However, even if this obligation is implemented we have a strong concern that the dominant market parties offer the asymmetric product parts at very high prices compared to the symmetric pendants exploiting the current position of market power. This would make the entrance either impossible or would ask the new entrants to offer their asymmetric products largely below market value. We understood from our discussions with Elia, that it is intended to prohibit this exertion of market power by imposing total cost rules that would not allow to increase the costs of asymmetric products artificially. Considering the low competition on the market we however fear that in case the first new entrants offer primarily R2 up (R2 down respectively), that market parties with market power can react by price dumping this very product part and increasing the cost for the pendant R2 down (R2 up respectively).</p> <p>We would therefore like to ask Elia to consider the following two additional approaches:</p> <ul style="list-style-type: none"> - Obligation for all market parties to over a part of the overall offered volume (e.g. 25 %) as fully asymmetric products (no symmetric offer for these volumes)

	<p>and/or</p> <ul style="list-style-type: none"> - Elia sources a part of the over all sourced volume (e.g. 25%) only from asymmetric bids. <p>Furthermore, we would be happy if Elia put the discussion of the capacity bid and selection process for R2 on the agenda as soon as possible as it is a crucial element for the success of the product.</p>
--	--

Answer of ELIA

Elia confirms that there will be bidding obligations for the two directions, i.e. aFRR down and aFRR up. A total cost rule will indeed be imposed. By allowing 4-hour blocks (together with 24-hour blocks) and by imposing bidding obligations for the aFRR up and aFRR down direction, Elia believes that non-CIPU flexibility can compete in the capacity tender. On top of that, imposing an asymmetrical procurement of a certain volume will be sub-optimal from a cost efficiency perspective. It is always optimal to have all the volumes competing in one tender in order to select the cheapest ones.

Stakeholder	Feedback of Stakeholder on the “one step approach”
FEBEG (specific comments and suggestions)	<p>Separate procurement FCR and aFRR (§ 6.2.2.)</p> <p>As regard the way forward for the implementation of the separate procurement of FCR and aFRR, Elia proposes two options. FEBEG is clearly in favor of the first option, i.e. ‘one-step’ option: the aligning the timing of the introduction of the new aFRR design with the shift to the full regional FCR procurement.</p> <p>The following elements justify this choice:</p> <ul style="list-style-type: none"> • Taking into account the costs of the high number of implementation projects in Belgium, but also in other countries, FEBEG recommend to skip as much as possible unnecessary implementation steps and to go directly to the target model, e.g. inclusion of Belgian FCR needs in the regional platform. • Given the increasing workload related to short term ancillary tenders, this approach will also allow for operational efficiency: it will avoid to increase even more the operational pressure in the short term markets.
FEBELIEC	<p>On the separate acquisition of FCR and aFRR, Febeliec takes note of the input and analysis provided by Elia on this topic in multiple related studies. Febeliec is not opposed to this. However, Febeliec is concerned that this might lead to a reduction of liquidity and/or a higher sourcing costs as market players might start exerting different bidding behaviour ,thus leading to a less efficient overall outcome and thus an unacceptable higher overall costs for consumers. Febeliec would like Elia to provide a more thorough quantitative impact analysis of this proposed split, in order to be able to assess more in-depth the potential impact for consumers. On section 6.2.2, Febeliec has no strong preference, as also Elia does not seem to be complete convinced from either one of the proposed solutions. From a practical point of view and in order to avoid too numerous changes to internal operational</p>

	<p>procedures and product designs, Febeliec would rather lean towards a one-step approach, insofar that Elia has a clear view on the availability of sufficient volumes after this split to fulfil all the required volumes at an acceptable price level. Febeliec is mainly concerned about arbitrage and an in the end higher overall balancing sourcing cost.</p>
<p>RESTORE</p>	<p>Proposed way forward with respect to the joint procurement of FCR and aFRR</p> <p>As underlined in its response to the Elia survey on split of FCR and aFRR procurement released earlier in 2018, REstore challenges the proposal of Elia to wait until the launch of the new aFRR design to implement the split procurement.</p> <p>Indeed, the current joint procurement creates a highly opaque environment for participants to the FCR auction only, and clearly gives an advantage to the participants to both auctions. Indeed, FCR participants have no information regarding how the must-run costs of CCGTs are split by the BSP between FCR and aFRR since the prices of submitted aFRR non-selected bids is not communicated. This gives such BSPs the ability to force a dumping of prices of FCR given this asymmetry of information, and artificially lowers the price of FCR local auctions. Concretely, to be selected in FCR local auction a BSP offering only FCR has to guess how the must-run costs are split between FCR and aFRR offered volumes by BSPs offering both, and hence have to propose lower than require prices to get a chance to be selected.</p> <p>Since the must-run costs of CCGTs participating in aFRR anyway have to be born most of the time as of today (because of a lack of liquidity in aFRR), we ask Elia to reconsider its conclusions and implementation as of January 2019 a split procurement of FCR and aFRR. This will contribute to create more transparent price formation processes, and since ending the artificial downward pressure on local FCR prices, lead to a temporary increase in FCR prices. However, we believe that this is justified since the current situation offers unequal access to information. This increase should also be limited since it is more logic for CCGTS to include entirely the must-run costs in the aFRR bids, therefore leading to lower FCR bids for those MWs.</p>
<p>NEXT KRAFTWERKE</p>	<p>Preferred option for implementation – several steps or one-stop (p. 41)</p> <p>Next Kraftwerke is fine with a one-stop option even though this might mean that the product will be opened at a later stage.</p> <p>Next Kraftwerke however only votes for a one-stop option if Elia can provide a high level of certainty that the suggested timeline can be kept and that a go-live by January/February 2020 is highly probable.</p>
<p>Answer of ELIA</p>	
<p>The (partial) regional procurement of FCR (August 2019) and the design changes which were implemented in May 2017 has made the sourcing of cost of FCR less dependent on units with must run costs. Moreover, Elia believes that, at the moment of the go-live</p>	

of the separated procurement of FCR and aFRR, even a larger share of bids sourced from new technologies will be offered to the FCR market. Therefore, we believe that there is no reason for an additional quantitative analysis.

Adaptation added to the design note:

Based on the feedback of the stakeholders, Elia will implement option 1 (separated procurement of FCR and aFRR and merge with regional FCR procurement) for the go-live of the new aFRR design. The separated procurement of FCR and aFRR will be included in the proposition for an implementation plan.

5. Secondary market

This chapter presents the feedback of the stakeholders on the secondary market.

Stakeholder	Feedback of Stakeholder on the secondary market
FEPEG (specific comments and suggestions)	<p>Reconstitution time after a forced outage (§7.3) Elia proposes to reduce the reconstitution time after a forced outage from currently 6 hours to 4 hours. As a cold CCGT start-up takes 6 hours, this evolution to 4 hours appears to increase the risk on aFRR providers from CCGT's for penalty exposure after outages. FEPEG doubts whether the secondary market is liquid enough to allow participants to rely on this 24/7 in case of forced outage. The capacity procurement by blocks of 4 hours does not justify the decrease of the reconstitution time, as by nature a forced outage cannot be foreseen when bidding the capacity.</p>
Answer of Elia	
<p><u>No modification to design note</u> With the opening of the aFRR market to all technologies, Elia is convinced that the liquidity of the secondary market will increase so that a reconstitution time of 4 hours is feasible.</p>	

6. Bidding process

In this chapter, the feedback of the stakeholders on the bidding process is described. Elia has received feedback on the following topics:

- General principles of a bid
- Price cap

Stakeholder	Feedback of Stakeholder on the general principles of a bid
<p>FEBEG</p> <p>(specific comments and suggestions)</p>	<p>Nomination of energy bids (§8.2)</p> <p>FEBEG also wonders if Elia has assessed the impact of the proposals on the portfolio effect. FEBEG clearly regrets that the portfolio effect will be seriously reduced, thus reducing the possibility to optimally dispatch in real time within a portfolio:</p> <ul style="list-style-type: none"> - on the availability test: the portfolio effect is reduced to the units nominated in a reserved bid (each bid is considered individually); - on CIPU units: only one unit per bid is allowed which means that there's no portfolio effect at all; - on activation control: the portfolio effect is limited to the units nominated in bids (together), instead of the prequalified units of the BSP; - on non CIPU units: the volume per bid is limited; - on the combination of CIPU and non CIPU units in a bid: this is simply not allowed; - on the re-nominations: these are possible, but only until H-25 minutes (FEBEG supposes it is until Qh -25 minutes) meaning that no switch is possible in real time; comment on 'Reserved bids can be updated until the balancing energy GCT (volume, activation price,...)': FEBEG supposes it is possible to switch completely the reserved volume to other units. <p>FEBEG does not understand the interest of Elia for significantly reducing options for BSP's to create a portfolio effect as this will effectively impact BSP's: less (real time) optimization, implementation costs of the new rules,... Ultimately, the resulting additional costs will be reflected in the prices of the offers.</p> <p>FEBEG has also the following proposals with regard to the nomination of energy bids:</p> <ul style="list-style-type: none"> - the nomination platform should allow automatic nominations, i.e. a machine to machine system; - it should be possible (but not compulsory) to nominate units together or to link the energy bids to each other in case CIPU units are linked to each other, e.g. GT and ST in a combined cycle mode.
<p>FEBELIEC</p>	<p>On section 8.2, principle 9, Febeliec supports with the pragmatic approach taken by Elia, in order to get a balance between allowing as much flexibility as possible while not creating unnecessary barriers of</p>

	entry for new market actors that could contribute to the delivery of aFRR volumes.
RESTORE (additional comment)	The principle presented on page 50 regarding the impossibility to have 2 energy bids with a mix of reserved and non-reserved power is unclear, and we would like to get further elements justifying this since this limitation can raise some issues for the pricing of assets with different opportunity costs.
Answer of ELIA	
<p><u>No modification to design note:</u></p> <p>The reason for having only one bid with both a reserved and non-reserved volume is linked to the availability test. If the reserved volume of a bid is being tested during an availability test, only the reserved volume is tested, but the complete bid (i.e. reserved and non-reserved volume) is put as unavailable for the aFRR services. By only allowing one bid with a reserved and non-reserved volume, only the non-reserved volume of one bid should be made unavailable for the delivery of the aFRR services.</p> <p>Elia wants to have a clear view on the aFRR volume that can be activated on each CIPU asset and will use the information received on the bidding platform to have this overview. Since updates on this bidding platform are possible until 25 minutes before the start of the concerned quarter-hour, Elia is convinced that this leaves sufficient flexibility to the BSP to optimize their portfolio close to real-time. A BSP still has the flexibility on which of the nominated units he will activate the aFRR volume in real-time. On the bidding platform, (re)nominations are allowed until Qh-25 minutes. It is indeed possible to switch the reserved volume to other units taking into account the red zones until Qh – 25 minutes. A B2B is foreseen for the bidding platform.</p>	

Stakeholder	Feedback of Stakeholder on the price cap
FEBELIEC	With respect to section 8.6, Febeliec is in general not in favour of introducing price caps. However, as the balancing market and the aFRR market in particular are not very liquid, with a very limited number of actors and a very high market concentration as shown by the HHI index, Febeliec would support the introduction of a price cap above the value of the Intraday market price cap in order to limit the margin for abuse from market players, and this until the level of competition and liquidity (both number of actors and volume) have sufficiently increased to allow for the abolition of such price cap. A yearly monitoring process by Elia in coordination with the CREG and all other stakeholders could be organised in order to analyse the evolution and define at which point it would be opportune to remove price caps and let a mature market decide on price levels independently.
RESTORE	<p>Maximum activation price for reserved bids</p> <p>REstore does not support Elia's proposal to implement a price cap for reserved bids.</p> <p>In particular, we foresee situations where the price of aFRR bids could indeed be higher than available mFRR bids, but that would not have been activated by Elia for several reasons, including the fact that a response time <15 minutes was required. As soon as aFRR bids are activated by the controller it is that a lack or excess of power is identified on the Grid: to fill this gap Elia can manually activate FRR</p>

	<p>bids if they happen to be at lower cost, but they will need 15 min to reach full power. In the meantime, aFRR can be activated, and therefore the price can reflect the quicker response time.</p>
<p>NEXT KRAFTWERKE</p>	<p>Price caps (p.55)</p> <p>Next Kraftwerke appreciates the removal or shift of price caps. A first stage price cap of about 1500 € for positive energy bids and of about -1500 € for negative energy bids seems to be a good intermediate solution to avoid market power excretion at high prices. We think that mid-term the price caps should be completely removed.</p>
<p>FEBEG (major concern)</p>	<p>Activation of aFRR/mFRR (§ 8.6)</p> <p>In the current proposal, Elia is proposing to go to a marginal pricing (most expensive activated bid sets the imbalance price) while still holding onto to a pay-as-bid towards the BSP's. Following article 30.1 of the EBGL, the balancing market should evolve towards pay-as-cleared for the balancing energy and have this reflected in the imbalance price. Elia seems to only propose the second part while omitting the first.</p> <p>FEBEG is of the opinion one cannot be implemented without the other: therefore FEBEG pleads to change both – implementation marginal pricing and pay-as-cleared towards BSP's - in one step. Implementing the one without the other, creates a disequilibrium in the price signal between BSPs and BRPs which is not acceptable.</p> <p>FEBEG also does not understand for which reason the pay-as-cleared mechanism could not be implemented as FEBEG notices that Elia is already proposing – which is much appreciated – mitigating measures to avoid 'demand spikes'.</p> <p>Should, nevertheless, Elia chose to still stick to the pay-as-bid mechanism for a temporary period, this can only be combined with a weighted average imbalance pricing for the aFRR activations.</p> <p>On top of that, FEBEG also insists on more clear and transparent rules for the activation of mFRR. At the moment the decision to start activating mFRR – to replace aFRR - is left to the dispatcher's assessment while this decision has an immediate impact on the activation of aFRR and the imbalance price.</p>
<p>Answer of ELIA</p>	
<p>In the long-term, it is required to have a settlement of the balancing energy based on a pay-as-cleared mechanism as also indicated in article 30 of the Electricity Balancing Guidelines.</p> <p>However, the prerequisites for having “pay-as-cleared” settlement for aFRR are defined in the “study on pay-as-cleared settlement for aFRR and mFRR activated energy” and are the following:</p> <ul style="list-style-type: none"> • A merit order activation 	

- Liquid aFRR market

With the go-live of the new aFRR design, a merit order activation will be put in place and thus the first prerequisite will be fulfilled.

The second prerequisite however, i.e. a liquid aFRR market, will only be met when sufficient new participants and new volumes started to offer aFRR energy bids after the implementation of the new design. Based on experience (ref. FCR) is it fair to state that it take time before such an evolution will happen. Therefore Elia will start with a pay-as-bid mechanism for the settlement of energy.

The rules for the activation of mFRR are currently described in the balancing rules. Elia understands the concern for more clarification but would like to emphasize that the implementation of fixed rules for the activation of mFRR is not straightforward as there are many different variables to be assessed.

For Elia is neither clear whether in the future the imbalance price in Belgium will be still predominantly driven by the activation of mFRR. With the opening of the aFRR market Elia expects that more aFRR volumes will be offered and activated. This might potentially change the dynamics of the formation of the imbalance pricing.

Adaptation to the design note

Based on the feedbacks of the stakeholders, Elia notes that there is a support for the implementation of a price cap as a transitory measure, although the proposed values for the price cap are very different. Therefore, Elia proposes to start with an upper limit of 1500€/MWh and a lower limit of -1500€/MWh for the up and down direction for reserved bids. In case this price limit is reached frequently, Elia will re-discuss the price cap with the relevant stakeholders.

Elia understands the concern of FEBEG and will considers the application of an average weighted imbalance pricing instead of a marginal imbalance pricing as transitory measure and will further analyses this. A final proposal shall be made in the course of 2019 also considering the choices made in the framework of the development of the regional exchange of aFRR.

7. Activation in EMS

In this chapter the feedback on topics concerning the activation in EMS are described being the:

- Merit order activation
- Transition between quarter-hours

Stakeholder	Feedback of Stakeholder on merit order activation
FEPEG (specific comments and suggestions)	Pro-rate activation versus merit order activation (§10.1) With a pro-rata activation all selected bids are activated at the same time, increasing the speed of the global reaction for Elia. With the proposed merit order activation, this advantage will be lost: how will Elia cope with a slower global reaction?
Answer of ELIA	
<p>Elia disagrees with the statement that there will be slower global reaction.</p> <p>There is no ex-ante selection of the bids and thus no volume capping in case of a merit order activation. Therefore, in case of large variations in the system imbalance, a larger volume of aFRR can be activated.</p> <p>Moreover, for large imbalances (e.g. 150MW), the merit order and the pro-rata system activate all bids in parallel, thereby achieving the same regulation quality.</p> <p>For small imbalances, a merit order system only activates part of the bids. This could indeed lead to smaller ramp rates with respect to the pro-rata system but we believe that the instantaneous imbalance netting with other TSOs shall compensate this effect.</p>	

Stakeholder	Feedback of Stakeholder
FEPEG (specific comments and suggestions)	Transition between quarter-hours (§ 10.2) The jump in the control request in case the bid volume for Qh1 is larger than the bid volume for Qh2 and the bid is fully activated during Qh1 and Qh2, should be avoided (the control request should at any time take the ramping rate into account) and in any case it should not lead to potential activation penalties.
Answer ELIA	
<p><u>No modification to design note</u></p> <p>When the avail_sec of the power units while ramping down is set to zero, these units are not taken into account in the activation control and thus no penalty will be applied. In case of errors, this should also be included in the 2% outliers that will be discarded during the activation control. This methodology is already applied today.</p>	

8. Control and settlement of balancing energy

Elia has received for the control and settlement of balancing energy some feedback on the penalties and the test results as described below.

Stakeholder	Feedback of Stakeholder on penalties
FEBEG (specific comments and suggestions)	Activation penalties for aFRR Down (§ 12.2.2) These penalties are based (partly) on the energy remuneration. So, how does this work for aFRR Down: the less a BSP pays for the energy to Elia, the less penalties he may incur? If the prices would be negative, will the penalty then also be negative?
RESTORE	Penalty for missed activation REstore understands Elia proposes to apply a specific penalty for the missing MWs following an activation of aFRR, that will lead to reduce both capacity and energy remuneration. We do underline that it seems inappropriate to add this layer of penalty in addition to the exposure to imbalance price for missed activations (which should be the right and only penalty for activation revenues).
Answer of ELIA	
<p>The aFRR service is a power product on a 4 seconds basis and not an energy product on a quarter-hourly basis. Elia sends a set point on a 4 seconds basis and requests that this set-point is followed (taking into account a certain marge). The exposure to the imbalance price is only quarter-hourly basis and does not give the right incentive to follow a set point on a 4 seconds basis. Therefore, the activation control and the according penalties are required.</p> <p><u>Adaptation to the design note</u> For the calculation of the penalty, the absolute value of the energy remuneration will be considered.</p>	

Stakeholder	Feedback of Stakeholder on the test results
RESTORE	Test results REstore notes that the tolerance bands for prequalification and activation control are expressed in % of the prequalified power. As these plays in favor of larger Providing groups (they will be able to more easily add a given flexible asset as they benefit from wider tolerances expressed in MWs), we ask that a minimum threshold is implemented (e.g. +/- 1 MW tolerance) to not hamper arrival of new aFRR groups on the market. As soon as their size increases, the proposed tolerance in % can be applied.
Answer of ELIA	
<p>The tolerance band for the prequalification is in % of the prequalified power. For the activation control, the tolerance band is in % of the volume of the activated bids during the concerned quarter-hour. The activation control is performed per BSP. The precision</p>	

of the measurement equipment is the minimum of 1% and 100kW. Meaning that for small units, the precision should be at least be 1%. Therefore, a tolerance band of 7.5% seems reasonable, also for small units. The minimum size of a bid also 1 MW.

9. Availability check

In this chapter, the feedback on the availability check is presented together with the vision of Elia.

Stakeholder	Feedback of Stakeholder on the availability check
FEPEG (specific comments and suggestions)	<p>Availability test (§ 13) The availability test should be designed to control only the availability of the reserved volume and not the baseline quality nor the ramping rate: it is key that reserved and non-reserved bids are controlled in the same manner for baseline and ramping rate.</p> <p>In case P_{measured} is different from P_{baseline} at starting point, some problems may appear:</p> <ul style="list-style-type: none"> - In case Elia requires to reach P_{baseline} + requested volume : if in a UP test, P_{measured} is lower than P_{baseline} at starting point, the 7,5 minutes ramp-up period may be insufficient with a normal ramping rate. A longer ramping period should be foreseen. - In case Elia requires to reach P_{measured} (at starting point) + requested volume : if in a UP test, P_{measured} is higher than P_{baseline} at starting point: this may be higher than the P_{max} of the asset <p>After a test, a transition period must be foreseen to reach the new set point. On top that, delay of 7,5 minutes to de-activate the aFRR and go back to baseline can be too short to stabilize the unit if the test is requested while the unit was at its upper or lower limit (availability test should only check the availability, not the ramp rate).</p> <p>FEPEG is also of the opinion that no tolerance on measurements is – from a technical perspective – not acceptable as all measures have associated deviations or tolerances.</p>
RESTORE	<p>Availability Test REstore supports Elia’s proposal to implement such checks only when the liquidity will increase sufficiently in aFRR so that some capacities start to be activated less often, therefore requiring to check from time to time that they are still able to deliver. In the current situation, since all MWs are frequently activated this indeed does not require an additional test.</p>
RESTORE (additional comment)	<p>As pointed in previous consultations, we believe that availability tests should be remunerated when they are successful. Especially, since principle 12 detailed on page 33 leads a BSP wanting to retest a providing group to not be able to participate to aFRR during that moment, this add an additional layer of costs to bear.</p>
Next Kraftwerke	<p>Activation tests one time per month (p73, Principle 12)</p> <p>On page 70 under principle 12 it is stated that Elia envisages an activation test one time per months</p>

	<p>This seems to be a very high frequency of activation tests which will result in high costs for the aggregator.</p> <p>We think that the following should be considered:</p> <ul style="list-style-type: none"> • If during the last x days (x to be defined, suggestion 30), the BSP provided the service with good compliancy and if the furthermore the BSP was able to also provide the requested power when the full or a large volume of the offered bid was activated (e.g. activation of >70% of the offered volume) no activation test should be executed or at least the probability of an activation test should be largely reduced. • In case Elia insists to execute activation tests frequently, it might be an option that Elia covers the activation costs provided the BSP responded correctly to the test signal.
--	--

Answer of ELIA

For the verification of the availability check, 15% of the outliers are excluded for the availability test and thus no tolerance band should be foreseen.

Elia will not remunerate the availability test since this is considered to be part of the reserve contract. Elia will also only test the reserved volume. The principle 12 on page 33 is valid for the simulation test and not for the availability test.

Elia recognize that the availability test has less added value as long as all the aFRR bids are frequently activated. However, in the future we expect that more aFRR energy bids will be offered and hence not all bids will be frequently activated anymore. Besides, an availability test in case of combination of aFRR and/or mFRR and/or FCR on the same delivery point is in any case required. This cannot be verified during the activation control of the aFRR product.

Elia is of the opinion that on average once per month to test the delivery points is a realistic frequency.

Adaptation to the design note

For the availability test, Elia will use the baseline at timestamp "0" as reference to check if the nominated bid volume is available. Elia recognize the problem that a transition period must be foreseen to reach the new set point when the bid(s) are again available for the aFRR services. Multiple solutions are possible and Elia will elaborate on this topic when drafting the T&C BSP. Since the FAT is 7.5 minutes, Elia is of the opinion that the baseline should be reached in 7.5 minutes.

PART 2: aFRR design with Transfer of Energy (“ToE”)

In this chapter, the feedback on ToE in the aFRR design is described. More in detail, feedback is received on following topics:

- Notification procedure
- Implementation of ToE
- Pass-through contracts and the exclusion of net-injection in the ToE-framework
- 4 second measurements versus 15 minute metering data for the ToE-settlement

Stakeholder	Feedback of Stakeholder on notification procedure
FEPEG	When no delivery points with ToE are nominated by the BSP, the notification procedure is abundant and should not be executed. This applies all the more for BSP’s who have no delivery points with ToE in their portfolio.
Answer of ELIA	
Elia agrees that no notification procedure is needed for those market situations without ToE . However, when the BSP uses at least one delivery point with ToE during a quarter-hour of activation, a notification message needs to be send for all delivery points of the pool (even those without ToE) for that concerned quarter-hour of activation. These notified delivery points from the BSP are used for the calculation of the delivered energy and the asymmetric imbalance algorithm.	

Stakeholder	Feedback of Stakeholder on ToE implementation
FEBELIEC	On part 2 with the discussion on ToE, Febeliec hopes that already the two options without the requirement for ToE will lead to additional volumes in the aFRR market. However, and insofar feasible, Febeliec is of the opinion, as in all other markets, that ToE should be introduced in order to allow all market players, also those not obtaining explicit permission from their BRP/supplier, to offer their capabilities and capacity on the (in this case aFRR) market. The introduction of ToE in aFRR could lead to the opening up of additional segments of suppliers and as such Febeliec would like Elia together with CREG and the stakeholders to continue to investigate this track and try to implement as soon as possible.

Answer of ELIA	
<p>Elia takes note of Febeliec his comment. However, Elia did not receive any feedback on the questionnaire of the aFRR design note. Therefore Elia has no view on the expected additional volumes that would be offered thanks to an implementation for aFRR at this stage.</p>	

Stakeholder	Feedback of Stakeholder on ToE implementation
Restore	<p>Restore supports the implementation of ToE to aFRR. We think this topic should not only be considered through current scope of the law, which limits ToE to net offtake, but within the wider scope of all assets provided by independent BSPs. Indeed, the ToE as such should not be limited to Demand Response assets, since it is justified by the need to organize ToE between two parties with the help of a neutral third party.</p> <p>We do believe that Demand Response will play a role in the new aFRR product, but even should the volumes be limited, ToE would be justified to handle the participation of other assets such as distributed generation.</p> <p>Therefore, we support a wider scope for ToE, and its implementation to aFRR given this is an energy content product with a merit order activation.</p>

Answer of ELIA	
<p>Elia takes note of Restore’s support for the implementation of ToE for aFRR. However, Elia did not receive any feedback on the questionnaire, therefore Elia has no view on the assets that will participate or volumes which will be offered.</p> <p>Next, Elia notices Restore its concern w.r.t. the exclusion of net-injection from ToE. Elia will assess possible alternatives (if any) to facilitate the participation of net-injection provided by independent BSPs.</p>	

Stakeholder	Feedback of Stakeholder on pass-through contracts and the exclusion of net-injection in the ToE-framework
Next Kraftwerke	<p>Pass-through contracts</p> <p>Imbalance-Pass-through contracts are contracts between the owner of an access point and his supplier/BRP in which it is stipulated that the owner of the access points also carries the full responsibility of imbalances (difference between his “nomination” to the supplier and the real production/consumption). In other words, any imbalance is passed through.</p> <p>The owner of access points typically opted for this solution because he wanted to sell their flexibility directly to Elia via “reactive balancing”. It is often argued that the holder of a pass-through contract sold his flexibility to the supplier/BRP. This is a totally wrong interpretation. It is important to note that the contract holders did <u>not</u> sell their flexibility to the supplier/BRP. On the contrary: As the imbalance costs/gains of activated</p>

	<p>flexibility are directly passed through to the owner of the access points, the ownership of the flexibility remains entirely with the owner of the access point.</p> <p>Even though the access point owner owns his flexibility it is impossible for him to freely participate in delivering reserve power, because the supplier/BRP is not obliged to pass through the corrections for an activation. This has the following consequences:</p> <ul style="list-style-type: none"> - For negative reserve power the supplier/BRP passes the imbalance through but keeps the positive correction, which usually is a payment by Elia to the BRP. The access point owner carries the costs of an activation, while the BRP/supplier benefits without any contribution on their part. - For positive reserve power the supplier/BRP has to pass the passes through the positive imbalance and is stuck with the negative correction. In this case the owner of the access point can exploit the situation and benefit also from the positive imbalance of an activation for which he is not corrected. <p>Next Kraftwerke had worked out various solutions on how a solution for pass-through contracts can be implemented. We think that the following rules and process would be a good solution:</p> <ul style="list-style-type: none"> - Principles: <ul style="list-style-type: none"> o The pass-through contract holder can freely join a BSP pool to provide reserve power as he is owner of his flexibility and always carries the responsibility of imbalances himself. The holder of this contract does not even have to inform the supplier/BRP about this step because the use of flexibility is therefore no novum for the BRP/supplier. On the contrary: This is what the pass-through contract is designed for. o Consequently, the BRP/supplier does not have to be informed about the activation of flexibility of such access point as the holder of the pass-through contract is always by this contract allowed to divert from his nomination and has done so before e.g. to follow day-ahead prices, in the framework of reactive balancing or simply to follow technical on-site constraints - Process in case of an activation: <ul style="list-style-type: none"> o BRP/Supplier <ul style="list-style-type: none"> ▪ In case of an activation, the Supplier/BRP is not informed and the Supplier/BRP is furthermore <u>not corrected</u> for the activation. ▪ The Supplier passes as the imbalance of the activation through to the holder of the pass-through contract as he would normally do by (pass-through) contract. ▪ There is no negative nor positive impact on the BRP/Supplier. o BSP
--	--

	<ul style="list-style-type: none"> ▪ The BSP is corrected for the imbalance of the activation. There is therefore also no positive or negative impact for Elia. ▪ The physical correction remains with the BRP of the BSP who takes the associated costs/gains. The BSP can then pass the monetary value of the correction through to the owner of the pass-through contract. The BSP and the holder of the pass-through contract can of course agree on any other settlement for this imbalance correction if desired. <p>This simple solution would solve the challenge to give pass-through contract holders access to the reserve power market via a BSP. The beauty of the solution is that the work for implementing this solution is limited for Elia as far as we can judge. Elia only needs to redirect of the correction to the BRP of the BSP.</p> <p>Net injection is discriminated against</p> <p>Next Kraftwerke has during various occasions (consultations, bilateral discussions, TF meetings) stated that the exclusion of net-injecting delivery points from the framework of transfer of energy is unacceptable and without reason:</p> <ul style="list-style-type: none"> - The limitation is discriminatory against generation technology. - There are no technical arguments to exclude net injection points. - The volume that can participate in the ToE is limited and therefore also the value offered for reserve power might be limited if the ToE proves to be an efficient framework to tap flexibility potential. <p>We believe that it is Elia's and the CREG's responsibility to advise the Belgian Government to make the necessary adaptations in the Belgian law to allow the participation of net-injecting access points in the ToE.</p>
<p>Answer of ELIA</p>	
<p>Elia takes note of Next Kraftwerke's proposed solution in order to facilitate the participation of pass-through contract holders to the aFRR market but also to other markets. This proposal will be analysed and discussed with concerned stakeholders. Furthermore, Elia remarks that the same rules as explained in section 8.2 of the ToE rules¹ (opt-out arrangement) for the correction of the perimeter of ARPsource and ARPbsp apply in Next Kraftwerke's proposition:</p> <ul style="list-style-type: none"> - No correction of the perimeter of the ARPsource - Correction of the perimeter of ARPbsp with the requested volume (Ereq) <p>Elia believes that such an alternative solution for the facilitation of pass-through contracts can both be applied for delivery points with a net-injection and a net-offtake character.</p>	

¹ These can be consulted on Elia's website: <http://www.elia.be/en/products-and-services/balance/transfer-of-energy>

Elia refers to Art. 19bis §2 of the Electricity Law regarding Next Kraftwerke's comment on the discrimination of net-injection: ToE can only take place in case of an activation of demand-side flexibility. However, Elia believes that the proposed solution (if proved viable) of Next Kraftwerke has the potential to (partially) solve the identified obstacle by multiple market participants with regards to the exclusion of net-injection in the ToE-framework: delivery points with an average net-injection on a yearly basis could be able to participate without the Supplier and/or BRPsource needing to be informed.

Stakeholder Feedback of Stakeholder on pass-through contracts

Activity	Activity proposes an alternative to the current methodology of pass-through contracts.
----------	--

Answer of ELIA

Elia analyses Activity's proposal and takes it up with concerned stakeholders, in parallel with the discussions that take place on Next Kraftwerke's proposal on pass-through contracts.

Stakeholder Feedback of Stakeholder on asymmetric imbalance adjustment

Next Kraftwerke	As Elia considers an activation following the set-point with +/- 7.5 % as compliant, we think that an overdelivery of 7.5% should not be considered an overdelivery yet. Any volume exceeding the 7.5% should however be considered overdelivery and can indeed be corrected as suggested in Annex 2 – Case Study.
-----------------	--

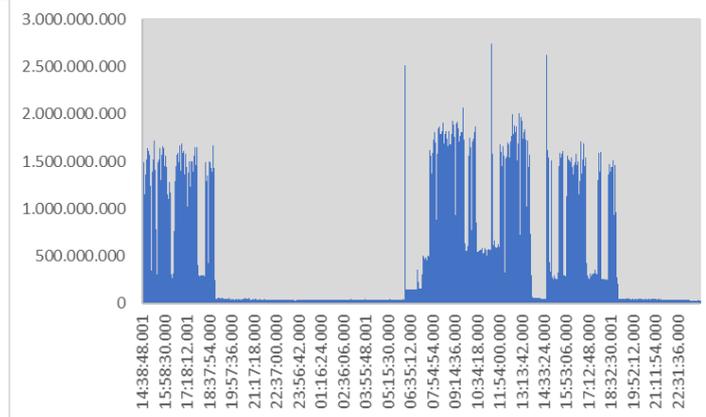
Answer of ELIA

Elia explains there is a clear difference between the rules for activation controls and the settlement in the context of ToE, as is also the case in the mFRR market. Even when an overdelivery occurs within a 7,5% limit, an impact is caused in the portfolio of the ARPSource and Supplier and therefore needs to be treated accordingly following the modalities of the ToE-framework.

Stakeholder Feedback of Stakeholder

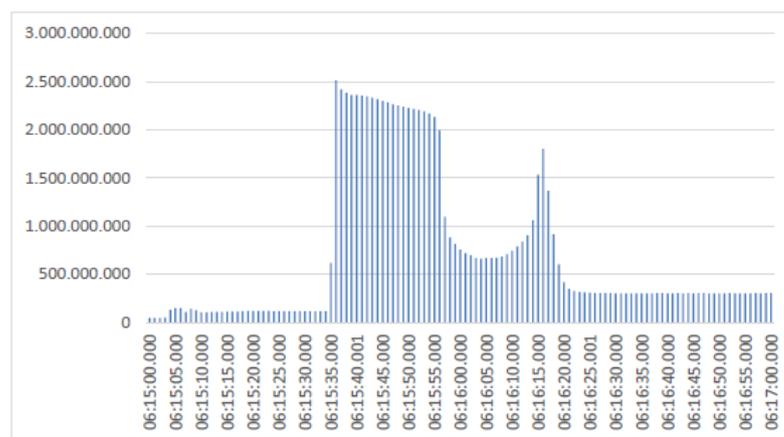
DSOs	<p>En TF Balancing, Elia a expliqué le besoin de données 4'' pour calculer les volumes aFRR livrés (Edel). Selon Elia, ces mêmes volumes servent d'une part à vérifier le respect des conditions d'activation et d'autre part à corriger le périmètre du BRP et permettre le transfert d'énergie. Les GRD sont d'avis qu'il y a lieu de distinguer les volumes selon leur utilisation.</p> <p>Dans le cadre de l'implémentation du datahub, une difficulté complémentaire est apparue pour des clients avec compteur de tête double sens : comment répartir le volume délivré entre le BRP source / supplier responsable du prélèvement et le BRP source / supplier responsable de</p>
------	--

	<p>l'injection. Cette difficulté a démontré le besoin d'établir des règles conventionnelles <i>ad hoc</i> pour le ToE.</p> <p>Dans le cadre de aFRR, ces difficultés sont plus significatives étant donné que la source de données est une source 4" et qu'elle ne proviendra pas forcément d'un compteur de tête « classique ».</p> <p>Les GRD considèrent que le ToE est nécessaire dès lors que l'effet de l'activation est visible au niveau du compteur de tête, c'est-à-dire quand le ou les BRP source(s) sont effectivement perturbé(s). Or ceci n'est pas toujours le cas. Citons par exemple :</p> <ul style="list-style-type: none"> • L'activation pendant 7" suivie d'un effet rebond dans le même quart d'heure n'impacte pas le BRP source. Faut-il dès lors un ToE ? • L'activation à la hausse pendant 7" suivie d'une activation à la baisse dans le même quart d'heure n'impacte pas le BRP source. Faut-il dès lors un ToE, qui plus est un ToE à la hausse et un ToE à la baisse vu la possibilité d'avoir un prix de ToE par direction ? <p>Par ailleurs, les GRD constatent également que</p> <ul style="list-style-type: none"> • La limitation du volume individuel activé au volume pré-qualifié (risque de congestion) devrait se faire au niveau du quart d'heure, pas par 4". • Elia propose de calculer le volume d'overdelivery au niveau des résultats agrégés 15', ce qui ne nous semble pas cohérent avec l'approche 4" décrite. <p>Enfin, calculer les volumes de transfert d'énergie sur base du profil du compteur de tête permet de scinder clairement les prescriptions techniques nécessaires pour permettre au FRP Elia de définir son produit des prescriptions nécessaires au FDM GRD/T pour le transfert d'énergie.</p> <p>Les GRD se demandent dès lors si le calcul des volumes ToE pour aFRR ne devrait pas suivre des règles très similaires à celles définies pour mFRR. Les GRD regrettent que les POC aFRR Elia en 2017 n'aient pas permis de clarifier ce point.</p> <p>Les GRD rappellent enfin que des photos de puissance toutes les 4" ne peuvent pas à proprement parler conduire au calcul d'une énergie 15'. En effet, entre deux photos, le profil du client final peut varier énormément. Ne faudrait-il pas alors parler d'énergie / 4" plutôt que de photo 4" ? (voir illustration en annexe).</p> <p>6. Annexe : données de mesures 4 "</p> <p>Le graphique suivant illustre l'évolution par seconde de la puissance prélevée (en VA) d'un client réel du réseau de distribution. Il s'agit d'une entreprise de traitement de carcasse de voiture. (mesures prises du 05.09.2018 à 14h38 au 06.09.2018 23h51)</p>
--	---



Il est déjà possible de constater sur ce graphique qu'il y a des pointes de consommation importantes qui durent 1 seconde. Si la « photo » 4 secondes est prise à ce moment-là, cela peut entraîner une surévaluation de l'énergie réellement mise en oeuvre.

Si l'on effectue un zoom sur le moment où la charge est lancée, soit à 6h15, nous avons le graphique suivant :



Sur cette période, nous avons calculé l'intégrale de l'énergie consommée, soit 23.701 kWh.

Si nous considérons 3 captures toutes les 4 secondes que nous décalons de 1 seconde (mesure 1 à 6 :15 :00 et puis + 4", mesure 2 à 6 :15 :01 et puis +4" et mesure 3 à 6 :15 :02 et puis +4"), nous pouvons calculer l'énergie sur cette base :

Mesure N°	kWh	Écart par rapport à l'énergie vraie	Écart par rapport à la mesure 1	Écart par rapport à la mesure 2	Écart par rapport à la mesure 3
1	25.417	7,24%	0,00%	8,55%	11,83%
2	23.415	-1,20%	-7,88%	0,00%	3,02%
3	22.728	-4,11%	-10,58%	-2,94%	0,00%

Nous pouvons constater sur ce simple exemple que l'écart du calcul de l'énergie selon le moment où la mesure est prise peut varier de plus de 10%.

Answer of ELIA

Elia agrees that those situations where one ARPsource charged with the offtake and a second ARPsource charged with the injection on access point were discussed in the context of the datahub project for mFRR. However, Elia disagrees that ad-hoc rules were put in place; the specific modalities for the correction of both ARPsource(s) are described in section 12.2 of the ToE-rules², which were consulted upon with all the market actors and approved by CREG.

Elia clarifies that

- Pollution/side effects that occur on site aside from the delivery point also influence the head-meter on access point. Due to the nature of the aFRR product (asset-level), both the control of the service and the activated volume (which can be subject to ToE) needs to be calculated on level of the delivery point;
- Rebound effects are not subject to ToE;
- Elia calculates the activated energy on a 4" basis and afterwards aggregates it (and thus nets it) on a 15' basis. This is coherent with the current approach for the aFRR market by CIPU units; the BRPbsp is corrected with an aggregation of the requested volume from an 4" basis to a 15' basis (= incentive correction).
 - The asymmetric imbalance adjustment algorithm will be executed after aggregation of 4" measurements on a 15' basis. At that moment Elia is able to determine the overdelivered volume on level of the BSP, being the difference between the requested and delivered volume on a 15' basis.
- that the same approach will be followed as for CIPU units, meaning 4" snapshots of the power measurements will be used as input for the settlement.

² The ToE-rules can be consulted on Elia's website: <http://www.elia.be/en/products-and-services/balance/transfer-of-energy>