



Proposal for an implementation plan for new aFRR design and separated procurement of FCR and aFRR

Market Development

09/11/2018

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INTRODUCTION

In the design note on the new aFRR design, several modifications have been proposed compared to the current product design: 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).

Elia presented the new aFRR design to the stakeholders via a public consultation that was organized between the 3rd of September 2018 and the 30th of September 2018. Based on the feedback of the public consultation, Elia has updated the aFRR design note and has drafted a consultation report. All information can be found on the website of [Elia](#).

Elia has also presented the study concerning the “separated procurement of FCR and aFRR products” to the stakeholders and organized a public consultation between the 20th of April and the 22nd of May. The feedback on this study is summarized in the consultation report. All information can be found on the website of [Elia](#).

Given the fact that the implementation plan of the new aFRR design and the separated procurement of FCR and aFRR products are highly interlinked, Elia has decided to perform a combined consultation for the implementation plan. This document presents a proposal for an implementation plan concerning:

- Part I: the new aFRR design (including a recommendation on ToE)
- Part II: the separated procurement of FCR and aFRR products

In addition, other topics are described in this document:

- A description on how data will be collected for the aFRR settlement for non-CIPU assets (assets without an individual power obligation) on both the TSO and (C)DSO grid.
- A proposal for the capacity tender with a combined procurement of 24-hour blocks and 4-hour blocks. Also the timings of the capacity tenders for FCR, aFRR and mFRR are described.
- ELIA proposes an integrated implementation plan for aFRR and mFRR considering the constraints set by the other balancing projects identified for 2019.

Part I: Proposition of the implementation plan of the new aFRR design

In this part, the proposal for the implementation plan for the new aFRR design, including a recommendation for ToE, is described. Additionally, two other topics are presented:

- A description on the methodology for the capacity tender is given in Section 1.1.
- A description on how data will be collected for the aFRR settlement for non-CIPU technical assets on both the TSO and (C)DSO grid is given in Section 1.3.
- A description of the set-up of an integrated implementation plan for aFRR and mFRR considering the constraints set by the other balancing projects identified for 2019 is described in Section 1.5.

1 Generic aFRR design

1.1 Capacity tender

It is anticipated that at the go-live of the new aFRR design the FCR procurement will be regional (i.e. merged with the FCR cooperation) and there will be no longer a local FCR tender¹.

For aFRR, as outlined in the design note, a daily procurement is proposed. Following the consultation on the proposed aFRR design it appeared that the original proposal, a procurement of aFRR balancing capacity via 6 blocks of 4 hours was 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 needs to be included in the capacity bids. As a result the capacity cost could artificially increase which goes against the principles of cost-efficient capacity procurement. Moreover, it appears that for some technologies – which are currently delivering aFRR reserves - offering for a 4-hour block is not so obvious due to technical constraints. Therefore, Elia will also allow 24-hour blocks.

1.1.1 Methodology

The key principles for the capacity tender can be found below:

- Combinations of 4-hour blocks and 24-hour blocks
- 24-hour blocks are obliged to bid also 4-hour blocks
- A total cost optimization for together aFRR up and aFRR down on a daily basis.
- Bidding obligations for the two directions being aFRR up and aFRR down.

A total cost optimization will be applied on a daily basis together for the 24-hour blocks and the 4-hour blocks for the both directions, i.e. aFRR up and aFRR down together.

The following bidding principles shall be applicable:

1. Obligation to bid in the 2 directions separately in case a symmetrical bid is offered.
2. Obligation to bid 4-hour products in case a 24-hour product is offered (symmetrical or not)

¹ See in this respect the latest official proposal of FCR Cooperation towards the concerned NRAs, from the 1st of July 2019 on and pending regulatory approval, FCR Cooperation will have a daily procurement with daily products with a Gate Closure Time at 15h00 and a publication time at 16h00 and from the 1st of July 2020 on, a daily procurement with blocks of 4 hours.

3. Total cost rule² will be applicable for all bids.

In case of a submission of a symmetrical bid of 30MW, an example of the application of the bidding obligations is shown in the graph below.

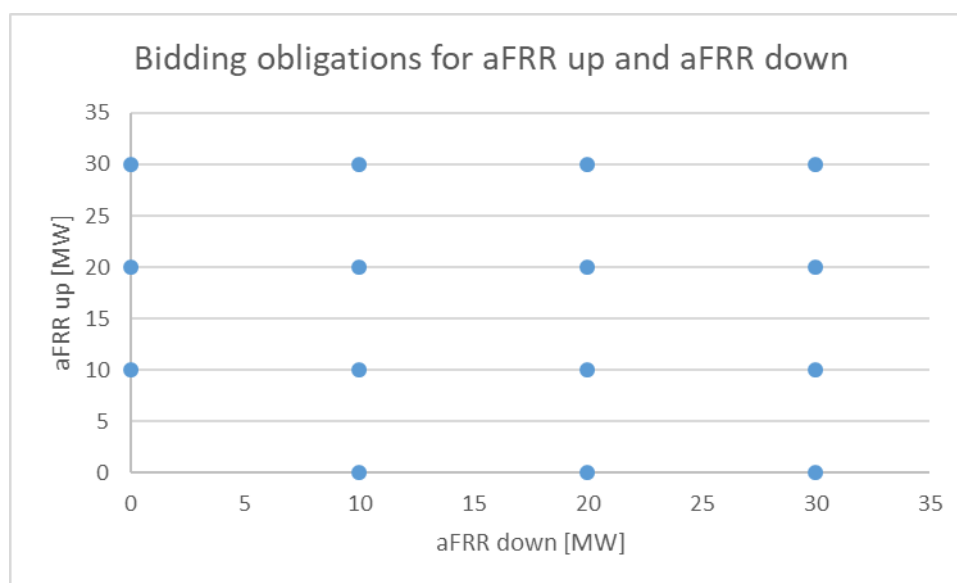


Figure 1 : Example of the application of the bidding obligations for a symmetrical bid.

1.2 Daily procurement cycle

1.2.1 Auction's timing

To determine how the procurement cycle of its three reserves (FCR, aFRR and mFRR) could be organized in the most optimal way possible, ELIA considered the following constraints:

- 1) From the moment an auction result is known, market parties must have sufficient time to re-optimize and offer non-retained volumes in the following auction. This signifies that aFRR, FCR and mFRR auctions must be organized **in sequence**;
- 2) Last auction results (mFRR) must be known ahead of the gate closure time of day-ahead market. Sufficient time should be given to market parties to re-optimize and offer non-retained volumes on this market;
- 3) Timing of FCR auction is fixed in the regional cooperation and cannot be changed. As of 1st July 2020, FCR gate closure time is 8:00 in day-ahead, while publication of FCR results is 8:30;
- 4) In ELIA's long term vision, the procurement of FCR, aFRR and mFRR must be **organized in day-ahead**, following transparent and simple procurement rules (**merit order selection**).
- 5) ELIA's long term vision must be aligned with the EU long term vision.

² The total cost (unit price * volume) of the smallest volume that can be retained resulting from a Capacity Bid, should never exceed the total cost of the smallest volume that can be retained from a Capacity Bid with a larger offered volume.

- 6) As long as more complex bidding instructions are required for a specific reserve (e.g: aFRR procurement), ELIA must carefully consider their operational impact and therefore must foresee as buffer an additional period of time (business checks; to cover IT related troubles...) for the organization of this reserve procurement.

The figure 3 below illustrates ELIA's long term vision. However, ELIA identified the **need to implement an intermediate solution** that would offer more time to auction operators (both from ELIA and from market parties) to organize the aFRR procurement. This will be indeed a reserve product with complex bidding instructions and a complex optimization function (total cost). **This intermediate solution would be implemented as of go live of the new aFRR design** and is presented in figure 4 below.

ELIA's long term vision on organization of daily procurement in day-ahead

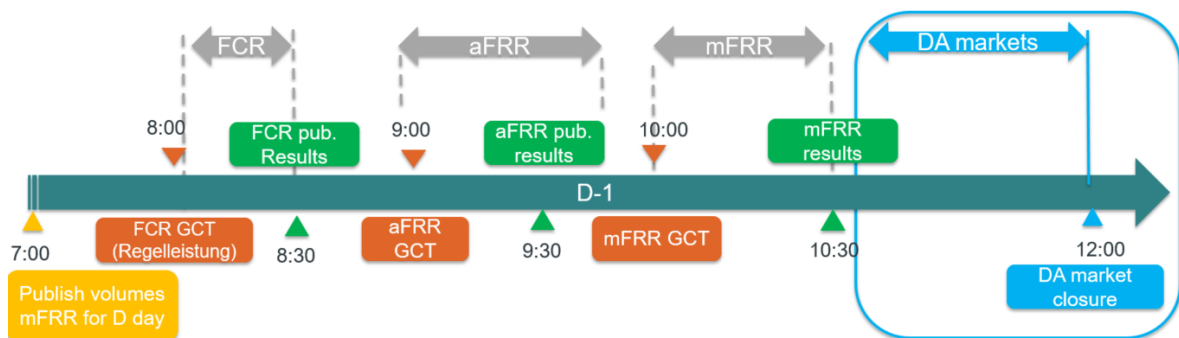


Figure 3 – ELIA's long term vision of organization of daily procurement of FCR, aFRR and mFRR.

Intermediate solution for the procurement of aFRR in daily cycle

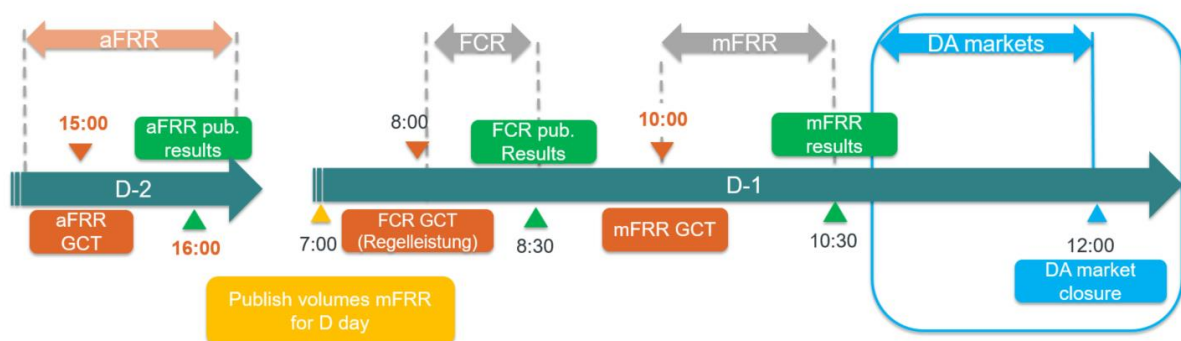


Figure 4 – Organization of 2020 daily procurement cycle – intermediate solution

The intermediate solution proposed by ELIA in a first stage (as of go live of daily procurement of aFRR) consists in organizing the aFRR procurement in D-2 afternoon (GCT at 15:00). It indeed offers the following advantages:

- **More time** is left for the auction operators (both at ELIA's and market parties' side) to find a solution in case operational issues are happening (IT, mistake in bid submission, ...);
- **No interference with mFRR auctions.** The risk for market parties not to be informed of the aFRR auction results (in case of operational issue) before gate closure time of mFRR auction is more limited in this scenario;
- **More time is left to market parties** – after the publication of mFRR auction results – **to prepare their participation to day ahead market** (gate closure time at 12:00 in day-ahead).
- **This scenario will give ELIA and market parties the opportunity to gain relevant experience on this new process before moving to a procurement on D-1.**

1.2.2 Alternative organization of daily procurement cycle

ELIA also investigated an alternative organization of daily procurement cycle where each reserve product is contracted in day-ahead and with an additional period of time left to the auction operator to follow up the aFRR auction; seen its complex set of bidding instructions. This alternative is presented in the figure 5 below.

Alternative organization of the daily procurement cycle

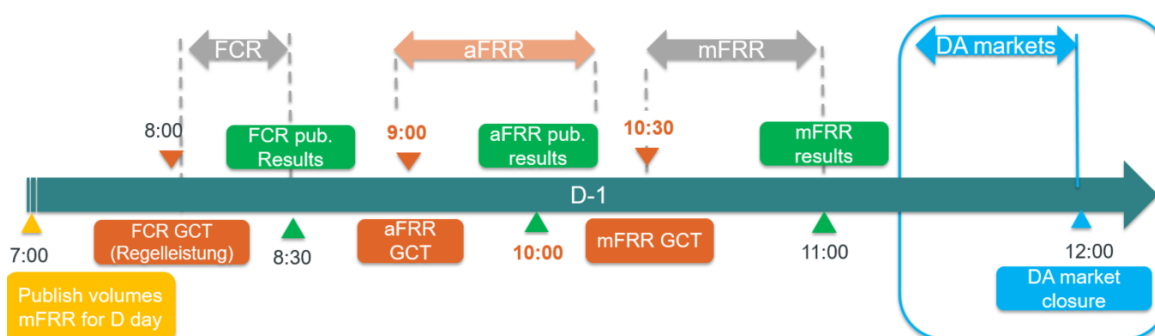


Figure 5: alternative organization of the daily procurement cycle

This scenario is not Elia's preferred scenario because of the following disadvantages:

- The mFRR GCT and results publication are delayed by 30 minutes. This concretely means that market parties have only 1 hour left to re-optimize their portfolio – based on the results of mFRR auction – in order to participate to the day-ahead market (GCT: 12:00);
- It offers less time to the auctions operators to react to possible issues (IT related or because of complex bidding instructions and checks that have to be respected for the new aFRR design). In some circumstances, it might even lead to the communication of aFRR auction results after the gate closure time of mFRR auction. This is of course sub-optimal for both market parties and for ELIA.

1.2.3 Second round

In case the volume to be procured by ELIA cannot be found during the product auction or in case of IT troubles, a second auction round will be foreseen by ELIA. It will be organized in day-ahead for all three reserves. Exact timing will be fixed by ELIA once the timing of the first round has been discussed and confirmed with market parties.

1.3 Real-time communication platform for aFRR settlement

1.3.1 Context

Today, the aFRR-service is exclusively delivered by large assets with a power scheduling obligation (“CIPU assets”). These CIPU assets have a RTU installed by Elia that is connected to Elia’s SCADA system in real-time. In its new aFRR design³, Elia described the opening of the aFRR-market to all technologies (small biogas units, cogeneration...) connected to both the (closed) distribution and transmission grid and described the different options for the collection of data on level of the delivery point.

Elia worked closely together with the DSO’s over the past few months to propose an architecture for the collection of data for the aFRR settlement. During this exercise, Elia was supported by Deloitte to provide technical assistance and analysis of the different options presented in the aFRR design note from a technical and economic point of view. The result of this work and assessment is now for the first time consulted via this proposition of the implementation plan.

Disclaimer: please note that the proposed architecture is considered to be applicable for all DSO connected delivery points. This position has been coordinated with the concerned DSOs, but is still subject to final approval by these concerned DSOs, as well as conditioned to approval of the affected regional authorities.

This section describes the proposed solution for the collection of measurement data and parameters for the settlement of the aFRR settlement, referred to in the following as “the real-time communication platform”. This proposed solution is then evaluated based on several design principles (scalability, authenticity,...), as were identified in the proposal of the new aFRR design.

Please note that the scope of this real-time communication platform only concerns the collection of data for the aFRR-settlement from non-CIPU units (on delivery point-level) and NOT:

- the parameters that need to be exchanged in real-time between a BSP and Elia (between SCADA Elia and SCADA BSP) (as described in section 4.4.2 of [the aFRR-design note](#)): or
- the data or parameters that need to be exchanged between Elia and a BSP for the delivery of aFRR with CIPU units.

³ The aFRR design note was consulted from the 3rd of September 2018 until the 30th of September 2018 and can be consulted on Elia’s website via the following link: http://www.elia.be/en/about-elia/publications/Public-Consultation/20180903_new-aFRR-design

1.3.2 Description of the real-time communication set-up

The real-time communication platform

The real-time communication platform, as shown in figure 1, is a cloud-based platform to which all non-CIPU delivery points participating in the aFRR service must be connected in order to transmit the following 4-second data in an efficient and reliable way:

- **Pmeasured:** The instantaneous net (gross if the net value cannot be measured) power measurement (in MW) per delivery point. The Pmeasured needs to be communicated directly from delivery point level to the communication platform (via the gateway as explained later).
- **Pbaseline:** The power (in MW) that the delivery point would have injected/consumed without the activation of aFRR service. The baseline is sent 60 seconds in advance and needs to be communicated directly from delivery point level to the real-time communication platform (via the gateway as explained later).
- **Avail_sec:** this is a logical (0 or 1) signal that indicates whether the delivery point is delivering the service for the concerned timeframe. The avail_sec needs to be communicated directly from delivery point level to the communication platform (via the gateway as explained later).
- **Psec:** The number of MW of $\Delta P_{sec_tot}^4$ that is attributed by the BSP to the delivery point in question. The Psec needs to be communicated directly from delivery point level to the communication platform (via the gateway as explained later).

The real-time communication platform receives all these parameters directly from the delivery point, to ensure a stream-lined data-exchange and avoid a complex synchronization of data afterwards. These data are used for the aFRR settlement (activation controls, baseline-checks, etc...). The communication platform is accessible for all delivery points which have been authenticated on the real-time communication platform. In addition, the architecture (technology & processes) used for the real-time communication platform ensures the integrity and confidentiality of all data.

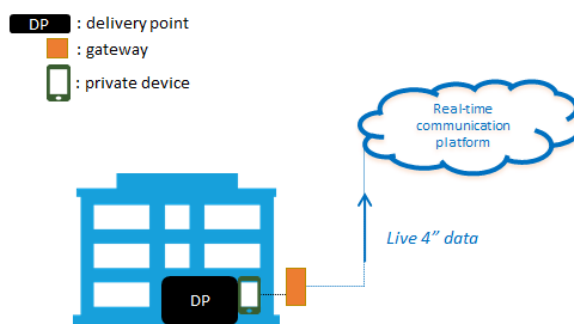


Figure 1

⁴ This is the control request (MW) that Elia will ask to each of its BSPs individually.

The private device and the gateway

Elia and the DSOs will allow market actors to use a **private device** to minimize entry barriers for participation to the aFRR service. Minimal technical and/or regulatory requirements⁵ for this private device and the measurement chain as a whole will be determined and will serve as a prerequisite for a successful prequalification of the BSP (and its delivery points).

Next, a **gateway** needs to be put in place to connect the physical asset in a digital way with the real-time communication platform. As for the private device, it will be allowed for market actors to use a private gateway to minimize entry barriers for participation to the aFRR service. To ensure a secure communication and a well-functioning of the architecture, minimal technical and/or regulatory requirements (to run the communication protocols,...) will also be defined for this gateway.

A minimum storage of individual data will be required and is to be foreseen locally by the BSP. Elia, in cooperation with the DSOs for DSO connected points, will reserve the right at any time to perform an **on-site audit** and/or to perform ad-hoc quality checks on the data and communication infrastructure that has been put in place for the delivery of the aFRR-service.

Disclaimer: for non-CIPU delivery points connected to the DSO-grid, a sealing of the physical link between the private device and the gateway is under investigation by the DSO's.

Connecting to the real-time communication platform

The **connection to the real-time communication platform** occurs during the prequalification phase⁶, which consists of the following steps:

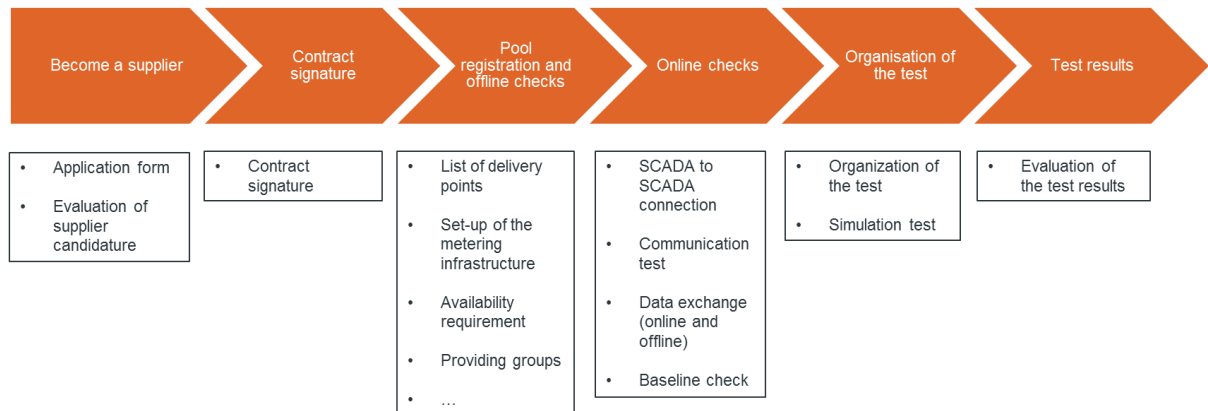


Figure 2

⁵ E.g. specifications of the device (accuracy, precision,...), modalities to guarantee availability of the real-time communication,...

⁶ More information regarding the prequalification phase can be found in the aFRR design note on Elia's website: http://www.elia.be/en/about-elia/publications/Public-Consultation/20180903_new-aFRR-design

This **connection is tested** during the communication test (part of the online checks) as shown in the figure 2 above. All non-CIPU delivery points need to be connected directly to the real-time communication platform via a gateway, connected to the private device. The BSP develops a client based connection on the API⁷ provided by the real-time communication platform operator and requests a client ID to the real-time communication platform operator for the delivery point in question. The real-time communication platform provides digital access by granting a digital certificate (Client ID) to the end user, if all necessary technical and/or regulatory requirements are met.

All of the abovementioned elements need to be put in place to successfully pass the communication test during the prequalification procedure.

1.3.3 Assessment of the real-time communication set-up

The following design principles have been identified, as also described in the new aFRR design note for the collection of data:

- **Market entry barrier:** minimize the market entry barriers by focusing on a solution that has limited technical and business complexity;
- **Scalability:** the number of participating assets to the aFRR market may potentially increase significantly. Therefore Elia and the DSOs believe that the set-up of the ex-post data exchange should be scalable and henceforth future proof;
- **Data-integrity:** guarantee the accuracy and completeness of the parameters per delivery point necessary for the settlement of the aFRR service, incl. ToE when applicable;
- **Data-authenticity:** guarantee that the data is authentic and has not been manipulated by any market actor;
- **Cost/complexity:** trade-off between benefits and costs, considering the relatively small asset size.

Market entry barrier

All non-CIPU delivery points are allowed to make use of a **private device and a private gateway** for the measurement, acquisition and access to the real time communication platform for the concerned data. For this matter, Elia and DSOs wish to offer **maximal flexibility** to providers to choose their own provider of the private device and the private gateway.

Scalability

The technology has been proven to work in other industries and sectors⁸. Current cloud providers are able to receive live data from millions of devices in a secure and reliable matter.

⁷ Application Programming Interface

⁸ The increasing reliance on cloud based technologies for exchange of sensitive information is not a development only explored & used by the energy sector. In the banking sector for instance, companies like Swift and their “Alliance Lite2” product launched in 2012 are already offering such approach to their clients.

Data-integrity

Data **integrity** relies on the minimal technical requirements that are set by **Elia and the DSOs**. By putting in place accuracy-requirements on the total measurement chain and retrieving this data live in real-time, Elia and the DSOs enable that data are recorded as intended and can later on verify if the data are the same as when these were originally recorded in real-time. Next to this, Elia and the DSOs will demand a **local storage** of measurement data to **ensure completeness** of data for example in case of a communication loss or a security breach.

Data-authenticity

Data authenticity relies on the real-time character of the communication set-up that is put in place. Elia and DSOs mitigate the risk of physical tampering of data by means of requesting data in real-time; this, combined with the fact that the aFRR signal is continuously recalculated, results in a minimized risk w.r.t. the physical tampering of data.

Furthermore, there is the possibility to execute on-site audits at all time, to verify the correctness of data and the compliancy of the measurement-infrastructure, incl. private device, private gateway and the connection to the real time communication platform. Finally, the BSP needs to store all measurement data and be able to send this at request of Elia.

Cost/complexity

Elia and the DSOs trust that the proposed solution **minimizes costs and complexity**, since it is based on existing technologies which are proven in other industries and sectors to be straightforward to implement and cost-efficient. Both the private device and gateway can be bought with external manufacturers, taken into account minimal technical requirements. This provides maximal flexibility and minimizes entry barriers to all market players and enables manufacturers to integrate these requirements in future assets, facilitating a simplified process.

1.3.4 Conclusion

Elia and the DSOs described how data will be collected for the aFRR settlement for non-CIPU assets connected to either the TSO or DSO grid as from the go-live of the new aFRR design. The solution of the real-time communication platform is minimizing market barriers and guaranteeing both integrity and authenticity of data. Compared to other identified options (asset-level signing, datalogger)⁹ the solution of the real-time communication platform is believed to be future proof and easily scalable to facilitate the entrance of several thousands of delivery points participating to the aFRR-service.

⁹ As mentioned in the aFRR design note.

1.4 Implementation plan for the new aFRR design

1.4.1 Evolution of contractual and regulatory aFRR framework

1.4.1.1 Terms and Conditions BSP aFRR

Historically, the delivery of ancillary services was conditioned to the signature of a CIPU¹⁰ contract by the BRP's of the concerned units and a GFA for aFRR by CIPU Technical Units. The current (2018) contractual structure applicable to the procurement of balancing capacity and delivery of the aFRR services is presented in Figure 2.

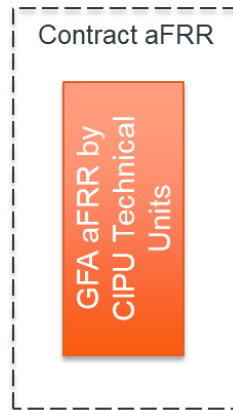


Figure 2 : Current contractual structure for aFRR

Six months after its entry into force, the European Electricity Balancing Guideline (hereafter "EBGL") required ELIA to submit the "Terms & Conditions for BSP" (T&C BSPs) to the national regulator. When approved by the national regulator, this new structure will replace current GFAs and Balancing Rules for the subjects concerning the balancing products. The evolution towards T&C BSP aFRR is presented in Figure 3. Elia has introduced T&C BSPs to CREG on June 18th.

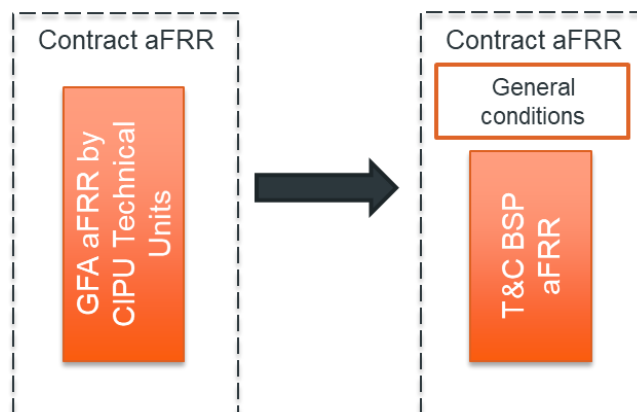


Figure 3 : Contractual structure for aFRR as of entry into force of Terms & Conditions BSP.

¹⁰ Coordination for the Injection of Production Units

The T&C BSP aFRR need to be updated in the framework of the new aFRR design. The update of the T&C BSP aFRR will need to follow predefined steps as stated below with (indicative) timings:

- Development of the T&C BSP aFRR: maximum 4 months
- Organization of a public consultation: one month
- Rework feedback of the public consultation: one month
- Regulatory approval: at least 6 months
- In case of request for amendment formulated by the regulator: 2 months for new proposal by Elia and 2 months for NRA approval as indicated in article 6 of the Guideline on Electricity balancing
- Signing of the contracts: at least one month

The signing of the T&C BSP aFRR is required before the testing during the prequalification process can start.

1.4.1.2 Balancing rules

The implementation of the new aFRR design including the opening of the aFRR market to all technologies requires an update of the balancing rules.

The update of the balancing rules will need to follow predefined steps as stated below with (indicative) timings:

- Development of the balancing rules: maximum 2 months
- Organization of a public consultation: one month
- Rework feedback of the public consultation: one month
- Regulatory approval: at least 6 months, since Elia assumes the same regulatory approval duration as for the T&C BSP.

It is assumed that this trajectory can be done in parallel with the update of the T&C BSP.

1.4.1.3 Other contracts

On top of that, a FSP/DSO contract, for delivery points connected to DSO grid and a CDSO collaboration agreement for delivery points connected to a CDSO grid needs to be updated.

The signing of the relevant contract(s) is required before the testing during the prequalification process can start.

1.4.2 IT implementation for aFRR

The new aFRR design involves significant changes compared to the current aFRR product leading to a large impact on the current IT infrastructure at Elia for the aFRR product. New tools or significant updates are needed for the following processes:

- New capacity tendering platform

- New bidding interface for energy bids and allowing pool based bidding
- Merit order activation of the energy bids – requiring a new module in Elia’s EMS
- Set-up of a new real-time communication platform, as described under section 1.3.
- New common T/DSO platform for data acquisition and data storage in the context of aFRR
- New settlement mechanism

Besides, today, only a limited number of CIPU assets deliver the aFRR service. By opening the aFRR market to all technologies, the number of assets that can deliver the aFRR service can increase significantly, having a significant impact on the complexity of the IT implementations.

1.4.3 Implementations on market side for aFRR

A successful completion of the prequalification process is required before the aFRR service can be delivered. Elia will foresee a time period of 1-2 months for the prequalification process before the go-live of the new aFRR design so that aFRR providers have sufficient time to perform the prequalification process. From a technical/implementation point of view, the prequalification process will be the most time consuming process for the current and new aFRR providers since in this process all the IT implementations for the delivery of the aFRR services will be tested. Also the following of a set point within a predefined band and the baseline quality will be tested. Lessons learned from the R2 non-CIPU pilot project were that the set-up of the SCADA to SCADA connection is a time consuming process as well as defining all parameters for the real-time data exchange.

1.4.4 Timelines for aFRR

Taking into account the timings as indicated in Section 1.4.1 for the contractual and regulatory framework and Section 1.4.2 for the IT implementation, the timing below is elaborated for the go-live of the new aFRR design:

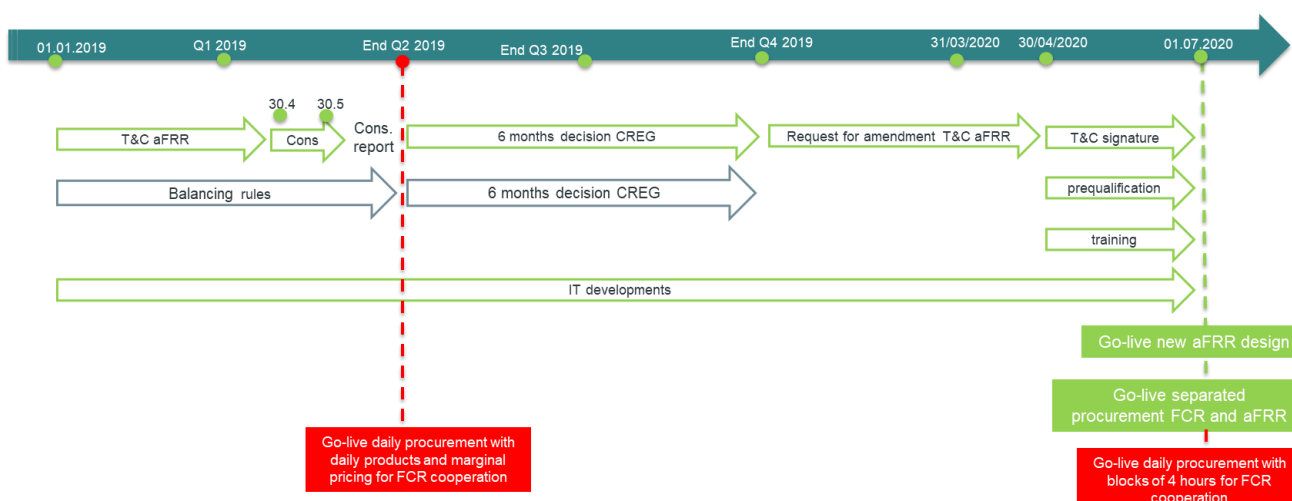


Figure 4: Timeline for the new aFRR design with go-live in July 2020

Based on all elements known today and taking into account the complexity of the project, Elia anticipates a go-live on the 1st of July 2020 and a start of the prequalification as from May 2020. The go-live of the separated procurement of FCR and aFRR as explained in Chapter 3 and the go-live of the new aFRR design are inherently linked and the go-live of both implementations have to occur at the same moment. The go-live of the separated procurement of FCR and aFRR products will be aligned with the go-live of the daily procurement with blocks of 4 hours for the FCR cooperation.

Elia realize that this go-live date could be later than initially expected by the stakeholders but Elia has taking into account for the timeline the contingency for the IT developments and regulatory approval (as time is foreseen for a request for amendment for the T&C BSP) and the operational impacts. Furthermore this planning allows for a sufficient time window between the go-live of the mFRR daily procurement (i.e. February 2020) and the new aFRR design to allow both the stakeholders and Elia to manage the operational impacts (see Section 1.5).

Elia fully recognizes the importance for market parties to have adequate foresight on a firm go-live date (both for commercial as well as for technical reasons). Whilst Elia will deploy all reasonable efforts to stick to the foreseen go-live date, a delay may however not be excluded.

Elia has investigated an earlier go-live of the new aFRR design, as indicated in Section 1.5.6. Although these timings could be possible from an operational point of view, given the considerations explained in that section, these timings have not been withheld as a viable option.

Elia has submitted for approval to the CREG the first set of T&C BSP aFRR on 18 June 2018 as required by the Guideline on Electricity Balancing taking into account the current aFRR product. At this moment, the CREG has not yet taken any decision on this matter.

For the new aFRR design, an update of the T&C BSP for aFRR already submitted for approval is required as presented in Figure 4. It is the assumption that by the time Elia will ask for approval for the changes to the T&C BSP aFRR, a final decision will have been made by CREG on Elia's initial proposal. In the above planning, the assumption has been taken that this will have taken place by the end of April 2019. Please note that EBGL foresees no binding approval timings and also provides the possibility for regulators to ask for a Request for amendment, which would potentially impact above timings.

Even without a final decision Elia is able to organize a consultation on the T&C BSP aFRR updated for the new aFRR design. But nevertheless, above timing for this consultation is planned for May 2019, so after the assumed decision date of CREG.

1.5 Integrated implementation plan for aFRR & mFRR

To understand how ELIA determined a realistic go live date for the implementation of the new design for mFRR and aFRR including separate procurement for FCR & aFRR, it is crucial to explain the links between the key balancing projects that will also consume time and budget in 2019. These resources are indeed limited for all involved market parties (regulator, ELIA and BSPs) and priorities must therefore be listed and aligned beforehand.

This section is organized in four parts. At first (section 6.1), ELIA explains the constraints considered for the integrated implementation plan setup. Then (section 6.2 and 6.3), impacts specifically related to the implementation of the changes in mFRR design are explained. This includes detailed information on the following projects as they influence the go live of mFRR daily procurement:

- The implementation of **dynamic dimensioning methodology**;
- The **offshore integration project**;
- The revision of **Balancing rules**;

Finally (section 6.4), ELIA details the implementation constraints of new aFRR design, including the separated procurement of FCR and aFRR products. An alternative option for the new aFRR design investigated by ELIA during the analysis is also presented in the same section along with the reasons for which it is considered by ELIA as a challenging scenario with considerable risk of delay.

1.5.1 Constraints considered by ELIA in the integrated implementation plan setup

The following constraints are identified by ELIA when looking at its integrated implementation plan:

1. The joint ambition to evolve to daily procurement for both aFRR and mFRR products. These are fundamental changes in the operational processes that must be prepared carefully with market parties. The go live of both **can therefore not be organized simultaneously**. Furthermore, the daily procurement cannot start during public holidays (e.g: 1.01.2020).
2. To minimize operational risks while gathering valuable experience from the operation of daily procurement auctions, ELIA must **start with the least complex product**. In this way, it clearly appears that the bidding rules proposed for mFRR are easier to implement and operate than those of aFRR.
 - ELIA must **start with the go live of mFRR daily procurement**.
3. The mFRR daily procurement is a pre-requisite to the implementation of a dynamic dimensioning methodology.
 - **Go live of mFRR daily procurement must be earlier or in parallel to the go live of dynamic dimensioning of FRR needs.**
4. New mFRR product mix – with updated mFRR flex product characteristics – must be implemented at latest in Q1 2020 to guarantee the consistency with the expected evolution of ELIA's operational needs.
5. Dynamic dimensioning methodology should be implemented by the time the offshore installed capacity has increased to 2.3 GW (Q1 2020) as highlighted in the study published by ELIA on this topic in 2017¹¹.
6. Results of dynamic dimensioning methodology should be published by ELIA at least one month before its go live to give a better understanding of the expected volatility to market parties. **A prerequisite to the publication of these results is the methodology's approval by the regulator.**
7. Existing contractual frameworks have to be replaced by regulated "Terms and Conditions". These documents must respect the validation process (and timing)

¹¹www.elia.be/en/users-group/Working-Group_Balancing/Projects-and-Publications/Dynamic-dimensioning-of-FRR-needs

detailed in the Guideline on Electricity Balancing. Hence sufficient time should be foreseen for the approval process.

1.5.2 mFRR new design

1.5.2.1 Contractual framework

There are two important evolutions foreseen in 2019 related to the contractual framework:

- 1) The integration of the current “bidladder contract” into the “Terms and Conditions mFRR” as detailed and justified in the R3 down design document¹² and;
- 2) The evolution of mFRR flex product as detailed in the implementation plan towards the daily procurement of mFRR¹³.

Taking into consideration the time needed to write the document, the requirement to organize a public consultation (1 month), to propose a consultation report (1 month), the time needed by the regulator to take its decision (estimated at 6 months, constraint n°7), and the time Elia and market parties need to make the changes operational, the earliest ELIA could go live with the daily procurement of mFRR is on 01.02.2020, as illustrated in the figure below.



Although the above timing respects ELIA’s constraints detailed above in section 1.5.1. ELIA already identifies **a regulatory risk** as this proposed timing does not take into consideration the legal possibility for CREG (according to article 6 (1) of the Electricity Balancing Guideline) to issue a request for amendment with regards to the T&C mFRR, which would add up an additional **4 month period of time**. It is clear that **if ELIA integrates these additional 4 months to the initial planning, constraints n°3 – 4 – 5 detailed above are not respected anymore.**

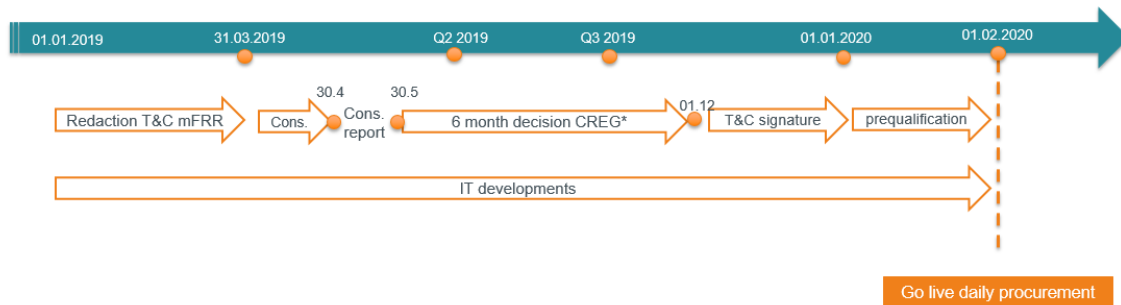
1.5.2.2 Operational impact

ELIA is aware of the significant changes a daily procurement process and an evolution of bidding rules in mFRR products bring on both the operators and the applications currently used to support their tasks. These impacts concern both ELIA and market parties and require time to be properly integrated.

¹² www.elia.be/~media/files/Elia/users-group/Working-Group-Balancing/Projects%20and%20publications/20180905_Design-note-R3-down.pdf

¹³ The design for the evolution towards a daily procurement of mFRR as well as the related implementation plan proposal can be found on ELIA’s website www.elia.be/en/about-elia/publications/Public-Consultation

ELIA estimates that the identified changes could be implemented in its tools by Q1 2020. The go live date of the 1st February 2020 fixed from the analysis of the contractual impact (see section 6.2) is therefore not modified.



1.5.3 Other projects

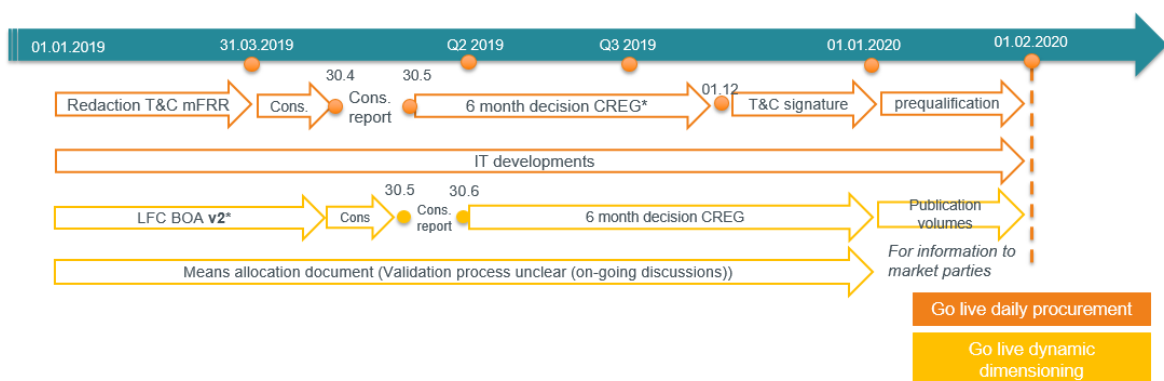
1.5.3.1 Dynamic dimensioning methodology

ELIA already presented at several occasions its intentions to evolve from a static dimensioning methodology of its reserve needs to a dynamic dimensioning methodology that would – in day ahead around 7:00 – calculate 6 different needs (each one corresponding to a 4 hour block) for a concerned day.

A pre-requisite to the implementation of such dynamic method is the **evolution to daily procurement**. The earliest it could be implemented is therefore the 1st February 2020 (in parallel with the implementation of daily procurement).

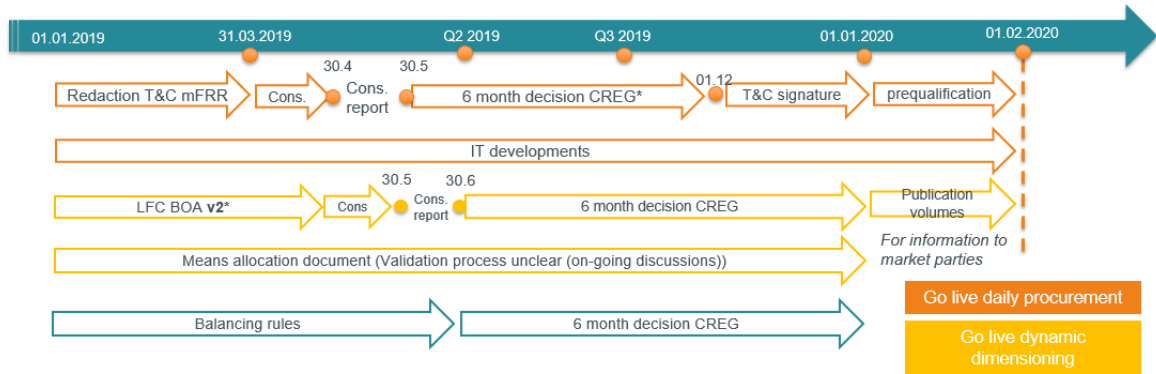
Changes in the dimensioning methodology (from static to dynamic) must be described and approved via the LFC Bloc Operational Agreement (in accordance with article 6(3)g and article 141(2) of the Systems Operations Guideline (EU) 2017/1485). As consequence, an updated version of the LFC BOA must be prepared, consulted and submitted to the regulator in 2019 for decision as illustrated below.

Finally, the allocation rules according to which ELIA will determine – among other parameters – the mFRR volume to be reserved for both mFRR standard and mFRR flex products must be described in a separated document. Its exact validation process is still unclear (on-going discussions) and can therefore not be clarified in this document.



1.5.3.2 Balancing rules

The introduction of an updated version of the balancing rules is already **foreseen in 2019 as it is a requirement of aFRR new design**. If some changes specifically related to the daily procurement and the evolution of mFRR product mix are required, ELIA will include them in the same version according to the timing presented below:

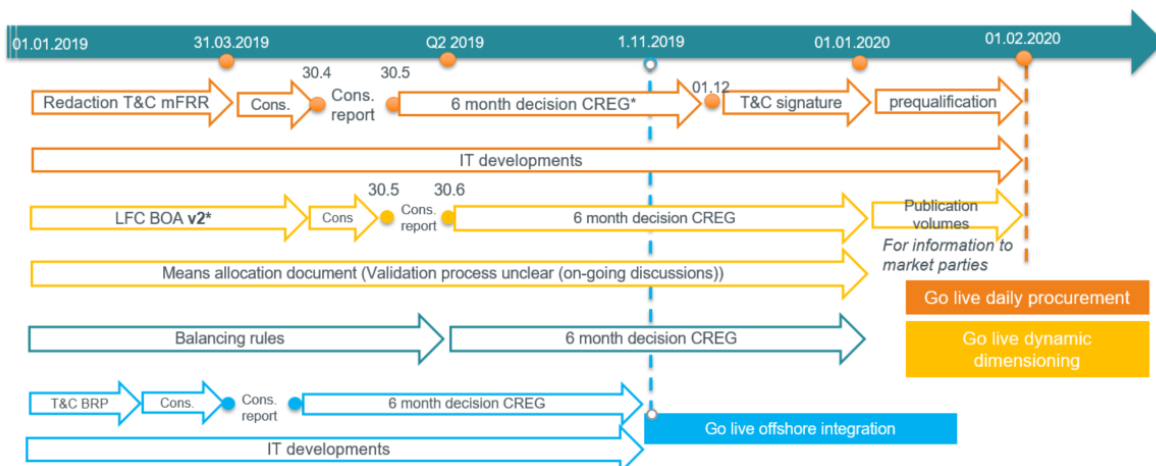


1.5.3.3 Offshore integration project

As explained above in this document, the offshore installed capacity is expected to increase to 2300 MW in Q1 2020. Specific operational procedures are currently being elaborated by ELIA and the concerned market parties to make sure the impact of storm events in the North Sea on the system imbalance is properly managed.

IT resources and budget are needed to make sure ELIA's (and market parties) current tools are adapted to support these specific procedures. In parallel, the Terms and Conditions BRP will also require an adaptation.

ELIA observed a correlation in the historical data available between the winter period (between November to March) and the occurrence of storm. This observation determined the go live of the specific operational procedures: November 2019. Finally, it is to be reminded that the increase of offshore installed capacity was one of the reasons ELIA decided to implement a dynamic dimensioning methodology.



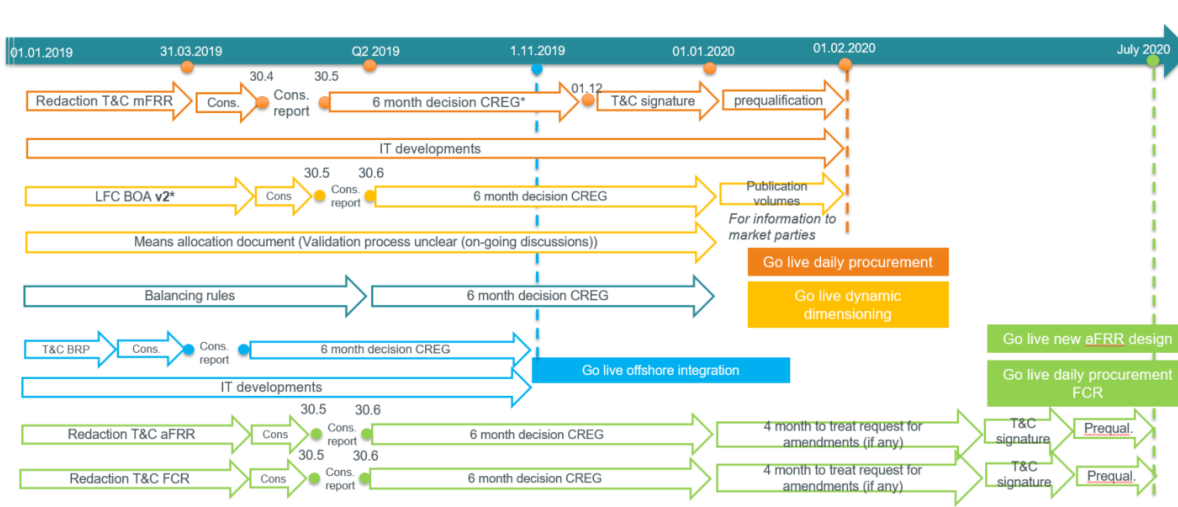
1.5.4 aFRR contractual framework¹⁴

The T&C BSP FCR and T&C BSP aFRR need to be updated in the framework of the new aFRR design, including the separated procurement of FCR and aFRR while an update of the T&C BSP FCR is needed for the shift to the regional procurement.

The update of both T&C BSP FCR and T&C BSP aFRR will need to follow predefined steps as stated below with (indicative) timings:

- Development of the T&C BSP aFRR and T&C BSP FCR: maximum 4 months
- Organization of a public consultation: one month
- Rework feedback of the public consultation: one month
- Regulatory approval: at least 6 months
- In case of request for amendment formulated by the regulator: 4 months
- Signing of the contracts: at least one month

Considering the timing detailed above, the go live date of new aFRR design and the separated procurement of FCR and aFRR products can be fixed to July 2020; in parallel to the go live of daily procurement FCR. This timing respects all constraints presented in section 6.1 of this document.

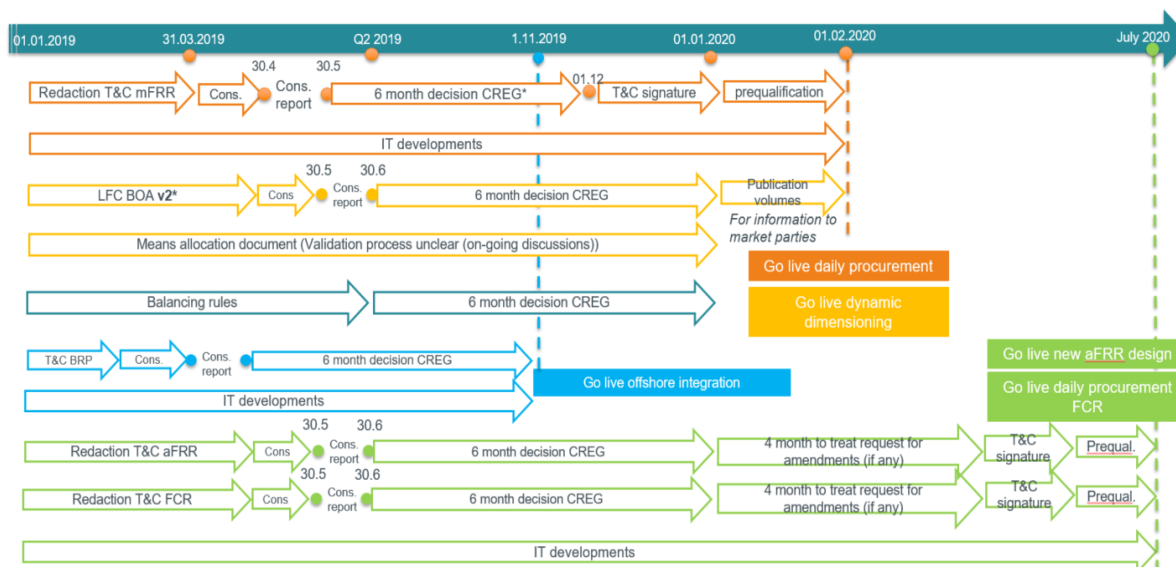


1.5.5 aFRR operational impact

ELIA is aware of the significant changes a daily procurement process and the proposed aFRR design bring on both the operators and the applications currently used to support their tasks. These impacts concern both ELIA and market parties and require time to be properly integrated.

¹⁴ The aFRR design as well as the related implementation plan proposal can be found on ELIA's website www.elia.be/en/about-elia/publications/Public-Consultation

ELIA estimates that the identified changes could be implemented in its tools by July 2020. The go live of July 2020 set by the contractual impact (see section 6.6) is therefore not modified.



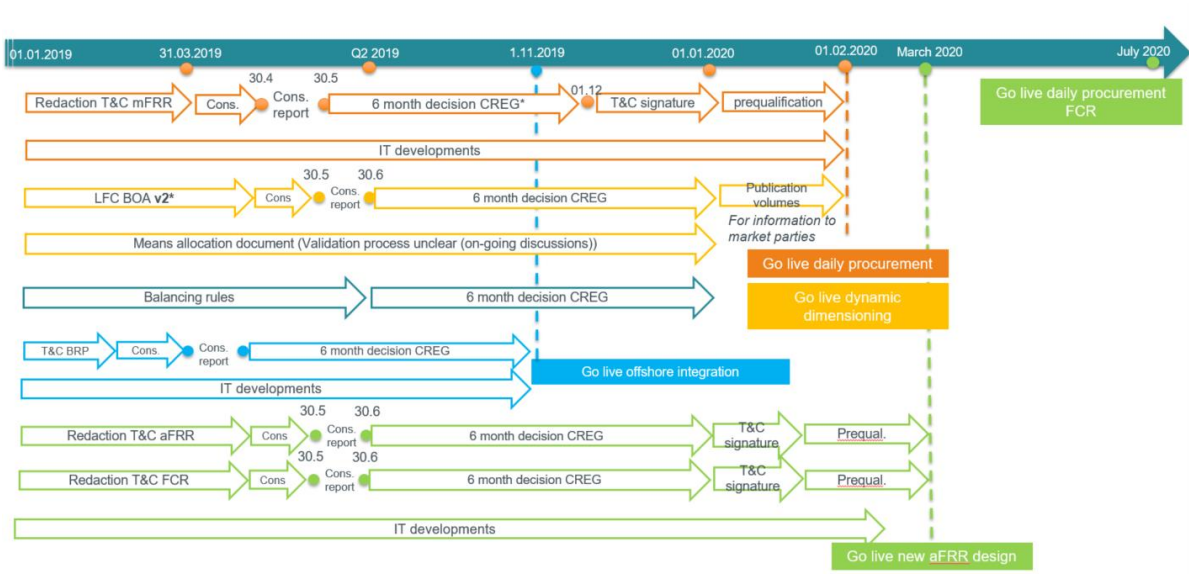
1.5.6 Alternative aFRR implementation plan

Irrespective of the exercise made in the previous section, ELIA assessed the possibility to move earlier the go live date of the new aFRR design, including the separate procurement of FCR and aFRR. Taking the same assumptions for mFRR daily procurement, dynamic dimensioning and offshore integration, ELIA evaluated the possibility to have an earlier go live for new aFRR design project.

An option with a go live in March 2020 came out from this analysis, as illustrated in the figure below. Even though it could be implemented from an operational point of view (at least at ELIA’s side), ELIA is of the opinion not to present this as its preferred scenario for the following reasons:

- 1) The **regulatory risk** identified on the mFRR daily procurement project becomes valid for the aFRR new design project as well as there are no more margin (4 months) to treat regulator’s possible requests for amendments;
- 2) As a consequence, **there would not have been any margin left** (in terms of resources) to treat **unidentified implementation request** (a.o: improvement suggestions from regulator or market parties on organization of current operational processes and tools). And past experiences showed how valuable it was for all market parties to have the possibility to quickly implement an answer to an identified operational issue.
- 3) In a similar logic, such timing would not have left any margin to design changes while some aFRR design aspects are still being consulted with market parties and might rightfully lead to design improvements;

In conclusion, the risk for ELIA to announce a delay in the go live of aFRR new design was too high in this scenario to be considered realistic, especially when looking at the impact on market parties such announcement would cause (e.g: contracts made with a go live date in mind with no possibility to use the contracted flexibility as anticipated by market parties).



2 aFRR design with Transfer of Energy

This part of the proposal of the implementation plan describes Elia's observations for Transfer of Energy (hereafter referred to as "ToE") for the aFRR market. These observations result in a recommendation regarding the implementation of ToE in the aFRR market. This recommendation is based on insights acquired from the R2 non-CIPU pilot project, the public consultation of the aFRR design note as well as technical feasibility aspects (IT-technical considerations) for implementing a ToE for the aFRR market. These observations result in a recommendation for ToE in the aFRR market, described in section 2.2 of this implementation plan.

2.1 Observations for ToE in the aFRR market

This section describes the various observations that Elia took into account to assess both the economic opportunity and technical feasibility of an extension of ToE to the aFRR market, as described in section 5 of the ToE-rules¹⁵. Elia summarizes its insights as follows:

1. **R2 non-CIPU pilot project:** Elia observed that the technologies that participated during the R2 non-CIPU pilot project¹⁶ were almost exclusively¹⁷ cogeneration units (biogas and natural gas), which showed to be reliable technologies to offer the aFRR service. All three project partners have demonstrated during the pilot project that non-CIPU units are technically capable in delivering aFRR.

Besides that, it appeared that an important part of those flexible cogeneration units were covered by a "pass through contract"¹⁸ signed between their grid user and his supplier.

- Elia concludes that net-injecting technologies accounted for **the major part** of the volumes, which BSP's offered during the R2 non-CIPU pilot project. They showed to be technically capable in participating in the aFRR balancing market.

2. **aFRR questionnaire:** In order to assess the economic feasibility of an extension of ToE towards the aFRR market, Elia added a questionnaire for market parties in the aFRR design note¹⁹. However, Elia did not receive any feedback from the market

¹⁵ The ToE-rules can be consulted on Elia's website via the following link: <http://www.elia.be/en/products-and-services/balance/transfer-of-energy>

¹⁶ http://www.elia.be/en/users-group/Working-Group_Balancing/Projects-and-Publications/R2-aFRR

¹⁷ Next to cogeneration units Actility participated with water pumps for the delivery of the R2 non-CIPU service.

¹⁸ Also referred to as a contract with valorization of the deviation, being a contract between the grid user and the supplier by which the supplier valorizes the deviation between the nomination and the final position of the grid user, whereby the grid user gives his fixed purchase before real time (usually in day ahead) and his supplier invoices him the deviation between the nomination and the actual offtake/injection or returns him at an agreed rate.

¹⁹ This design note can be consulted on Elia's website: http://www.elia.be/~media/files/Elia/publications-2/Public-Consultation/2018/20180903_aFRR-product-design_EN.pdf

parties concerning the type of assets and delivery points that will be providing aFRR and their eligibility for the ToE.

- At this moment in time, Elia has no view on the expected extra volumes/new technologies that would find their way to the aFRR market thanks to a ToE-mechanism in place for aFRR.
3. **Feedback from market actors on aFRR design note:** some market players support the implementation of ToE for aFRR, but deplore the lack of a solution for net-injection delivery points. The exclusion of net-injection in the current ToE-framework implies that generation assets can only participate via an opt-out agreement²⁰, which is perceived as a major concern in the context of aFRR.
- Elia observes that a principal concern lies in the fact that net-injection units cannot participate independently from their BRP and supplier. Based on the received feedback, Elia cannot pinpoint a specific need for ToE, considering the applicability of ToE for only delivery points with an average net-offtake character on a yearly basis.
4. **Pass-through contracts:** during the public consultation of the aFRR design note, Elia received feedback from two market actors proposing an alternative set-up for delivery points where grid user has signed a pass-through contract with its supplier.
- Elia takes note of the proposed solutions for pass-through contract holders and finds that such a solution has the benefit to facilitate the access for net-injection assets (with a pass-through contract) to the aFRR market.
 - Considering that a lot of **small flexible generation assets** operate under a **pass-through construction**, this solution could allow small generation assets easy market access via an independent BSP (without needing prior consent from BRPsource or Supplier) and therefore partially resolving the observed obstacle w.r.t. the exclusion of net-injection in the current ToE-framework. Elia describes an alternative solution for pass-through contract holders in Annexe 2.
5. **Technical feasibility for implementing ToE:** the implementation of ToE for the aFRR market is feasible from a technical point of view but requires substantial implementations as described in Annexe 1. Correspondingly, such an implementation goes hand in hand with considerable cost.
- Elia is technically able to implement a ToE, but is of the opinion that the cost for implementation needs to be justified with the prospect that this

²⁰ As described in section 8.2 of the ToE-rules, which can be consulted on Elia's website: <http://www.elia.be/en/products-and-services/balance/transfer-of-energy>

implementation will unlock extra volumes that will develop in the aFRR market.

2.2 Recommendation for ToE in the aFRR market

This section elaborates on Elia's recommendation for ToE, based on the acquired insights (technical, economical) summarized in the previous section. Elia recommends **postponing the choice to implement ToE for aFRR** as the effective use of it by market parties that would justify a substantial implementation cost cannot be demonstrated at this point in time. Elia cannot conclude that extra volumes would enter the aFRR market via a ToE-mechanism, considering the current limitations (exclusion of net-injection) in the legal ToE-framework.

Elia substantiates her recommendation with the fact that stakeholders insist on **a solution for the participation of net-injection assets in the aFRR market**, since especially for this aFRR-market these net-injection non-CIPU units can play an important role (see results R2 non-CIPU pilot project). For that matter Elia is of the opinion that the proposed alternative solution for pass-through contracts could have the potential to (partially) solve the identified needs from several stakeholders to enable BSPs to offer – independently from the BRP source - flexibility from non-CIPU delivery points with a net-injection character:

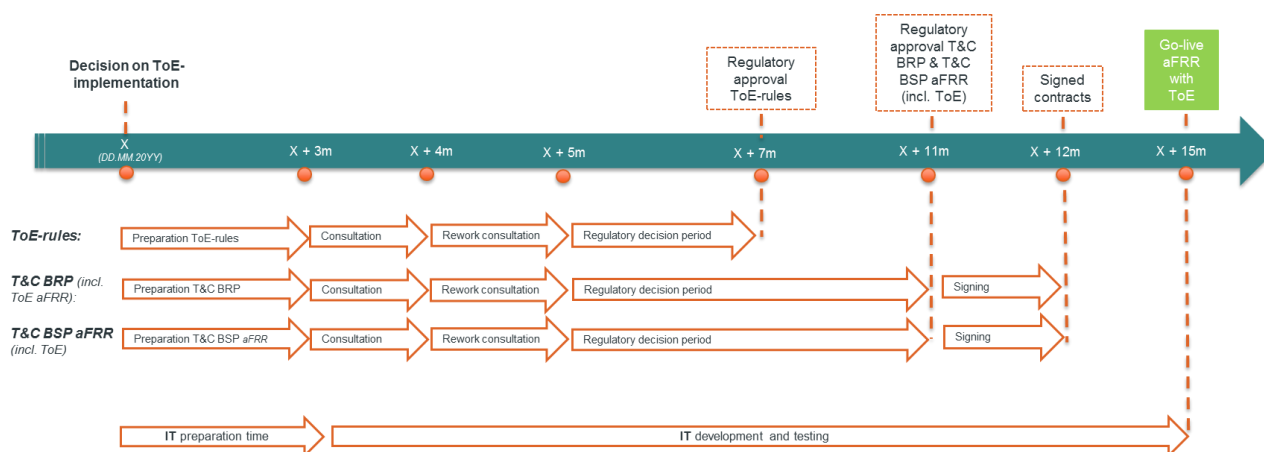
- Based on the received feedback from the public consultation on the aFRR design note, Elia described an alternative solution for pass-through contract holders in Annex 2 of this document. Such an alternative solution has the benefit of facilitating the entry for **pass-through contract holders** via an independent aggregator **without needing prior consent of BRP source and Supplier**. Elia proposes to analyse the potential of such an alternative solution (legal perspective,...) in collaboration with the concerned stakeholders and if proved viable, to foresee such **an alternative solution** in parallel with the opening of the aFRR market.
- Elia **invites market players to comment** on the alternative solution for pass-through contract holders as described in Annex 2.
- **Disclaimer:** This alternative solution has not been aligned with nor validated by CREG, in particular with respect to the principles established by the electricity law and the roles and responsibilities of the different affected market parties. Once aligned with the stakeholders, this alternative solution should be proposed to the CREG for approval.

On top of this, Elia proposes to reassess the economic opportunity of an extension of ToE in the market for aFRR in the course of 2020. A reassessment in 2020 has the following benefits:

1. It is able to include a *return of experience on the use* of ToE in the mFRR market;
2. By 2020 both Elia and the concerned stakeholders have gained insights on the facilitating effect of the alternative proposal for pass-through contract holders and a better view on the potential volume which cannot participate to the aFRR market due to absence of a ToE implementation;

3. The feasibility for an adaptation of Art. 19bis § 2 of the Electricity Law can be investigated, when it would appear that there still is an important volume of delivery points with a net-injection or net-offtake character that cannot participate to the aFRR market due to absence of a ToE framework.

If such a reassessment in 2020 shows a clear added value to implement ToE for the aFRR-market, **Elia can realize** such an extension of ToE in the aFRR market within a timeframe of **15 months**²¹, considering both the IT-technical implementation and contractual limitations:



1. IT Implementation

- a. 3 months preparation time
- b. 12 months actual development and testing

2. Contractual implementation:

- a. Adaptation of the ToE-rules:
 - i. Develop the documents: 3 months
 - ii. Public consultation of the ToE-rules: one month
 - iii. Rework feedback of the public consultation: one month
 - iv. Submission and regulatory approval: 2 months²²
- b. Adaptation of the T&C BRP:
 - i. Develop the documents: 3 months
 - ii. Public consultation: one month
 - iii. Rework feedback of the public consultation: one month

²¹ Counting from the moment a decision is taken (as from 2020) that a ToE needs to be implemented in the aFRR-market.

²² The proposed planning is based on the hypothesis of a regulatory approval within 2 months.

- iv. Regulatory approval : at least 6 month
 - v. Signing of the contracts: at least 1 month
- c. Adaptation of the T&C BSP aFRR:
- i. Develop documents: 3 months
 - ii. Organization of a public consultation: one month
 - iii. Rework feedback of the public consultation: one month
 - iv. Regulatory approval: at least 6 months
 - v. Signing of the contracts: at least 1 month

2.3 Conclusion

Elia's **recommendation with regard to the implementation of ToE** is consulted with all the concerned stakeholders via this proposition on the implementation plan. Elia showed that it is **technical capable** of implementing a ToE, but that currently Elia doesn't receive a clear signal from stakeholders on the added value of such an implementation, given that net injection delivery points fall outside the ToE scope. Indeed in the current legal framework only delivery points with an average net offtake character on a yearly basis could access the aFRR market via ToE, whereas according to stakeholders the biggest potential for aFRR flexibility lies with delivery points with an average net-injection on a yearly basis.

Elia understands the request of the stakeholders to find a solution for net-injection units in the context of the aFRR-market and proposes to investigate in collaboration with all concerned stakeholders an **alternative solution for pass-through contract holders**, which would potentially facilitate the access of a non-negligible part of the net-injection units to the aFRR market.

However, if Elia receives valid arguments via this proposal of the implementation plan that justify an implementation for ToE in the current legal framework, it could implement such an extension of ToE to the aFRR-market for Q4 2020²³, resulting in a phased approach between the proposed go-live date of the new aFRR design (as described in Sections 1.4.4 and 3.5) and with ToE (Q4 2020). This timings holds provided that on the implementation of ToE, a decision would be taken no later than January 2019.

²³ Taking into account IT implementations and the necessary contractual aspects such as an adaptation to the ToE-rules, T&C BRP and T&C BSP for aFRR.

Annex 1: Implementation of ToE from an IT-technical perspective

Implementation from an IT-technical perspective

The additional IT implementations for Elia in case ToE is implemented for the aFRR-market are the following:

- **Validation of 4 second parameters:** a new IT-development will need to be put in place to validate power measurements (4 second basis) and the baseline, since they lay both at the basis for the calculation of the delivered energy which is used for the perimeter correction of BRPsource and the financial compensation between Supplier and FSP.
- **Calculation of the delivered energy:** The calculation of the delivered energy has to be done on 4 second power measurements in contrast to mFRR where the delivered energy is based on 15 minute metering data. Therefore important additional computational processes need to be put in place.
- **Perimeter correction:** The BRPsource is corrected on a monthly basis with the delivered energy by the BSP, aggregated on the level of the balancing perimeter and aggregated on a quarter-hourly basis. These existing tools need to be adapted accordingly to take into account an additional balancing product and require important changes from an IT-technical point of view.
- **BRP notification:** The notification of Elia towards the BRPsource takes place at the latest 3 minutes after the quarter-hour during which an activation took place, based on the distribution of the activated volume (energy) over the different delivery points, as communicated by the BSP to Elia during his notification at the end of each quarter-hour during which an activation took place. This requires a new IT-tool that needs to be put in place.

Annex 2: Pass-through contracts

This annex illustrates the main principles regarding an alternative solution for pass-through contract holders to enter the aFRR market and is structured as followed:

1. Introduction: description of a pass-through contract
2. Proposed alternative solution for pass-through contract holders

Introduction: description of a pass-through contracts²⁴

A **pass-through contract** is a contract in which the electricity supplier (via his BRP) valorises the difference between the nomination and the real position of the end-user. The end-user gives his expected offtake and/or injection before real-time (we can assume that this is done in day-ahead) and his supplier invoices (or pays) him the deviation between the nomination and the real-offtake and/or injection at an agreed tariff (we can assume that this is done at a price close to the imbalance tariff - a margin).

Such a pass-through contract **enables the end-user** to become responsible for the deviation of its delivery point compared to its forecast and with other terms for his impact on the imbalance of this BRP, without the need for being a BRP himself.

Alternative solution for pass-through contract holders

The proposed alternative solution is a variant of a market situation without ToE (called Opt-Out) since the BSP and BRPbsp don't need to sign an agreement with the BRPsource and the supplier (as is foreseen in the current Opt-Out mechanism) but only with the end-user who holds a pass through contract.

In market situations with Opt-Out solutions the following principles are applied for the correction of the balancing perimeter BRPsource and BRPbsp:

- The balancing perimeter of BRPsource is not corrected;
- The balancing perimeter of BRPbsp is corrected with the requested volume in the opposite direction (- E_{req})

The following paragraph illustrates the main principles applied for such an Opt-Out variant for pass-through contracts via a use case for upward aFRR by an increase of net injection via a pass-through contract holder.

²⁴ Also referred to as contract with valorization of the deviation being a contract between the grid user and the supplier by which the supplier valorizes the deviation between the nomination and the final position.

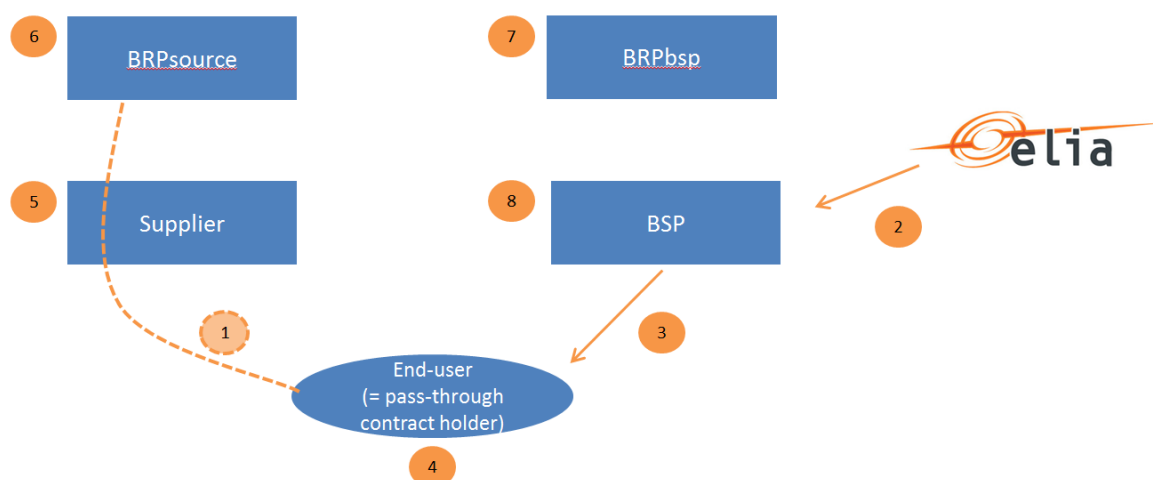


Figure 5

1. The **end-user** (who is a pass-through contract holder) nominates his expected offtake and/or injection on a quarter-hourly basis in day-ahead²⁵.
2. Elia activates **upwards aFRR** by sending a continuous (on a 4" interval) aFRR setpoint (ΔP_{sec_tot}) to the BSP, who delivers the service to Elia.
3. The BSP operates his pool and steers different delivery points in his pool for the effective delivery of the requested upward aFRR by Elia. This example shows how one delivery point (end user who holds a pass-through contract) **increases his injection** in real-time.
4. By increasing its injection, the **end-user** who holds a pass-through contract is **exposed** (via the pass-through construction) to the **imbalance price** for his deviation between its nomination and his real injection.
5. The **Supplier passes the imbalance** (coming from BRPsource) through to the holder of the pass-through contract.
6. The balancing perimeter of the **BRPsource is not corrected** with the delivered volume of aFRR, , as foreseen in the Opt-out modalities. Since BRPsource passes the deviation between the end user his nomination and the real injection via the Supplier to the pass-through contract holder this operation is neutral for the BRPsource and the supplier and does not differ from any other "normal deviation" of the end-user.
7. As foreseen by Opt-out modalities, the **BRPbsp**²⁶ takes up the balancing responsibility and is corrected by Elia with the **requested** volume of flexibility.
8. The **end-user and BSP** agree on a financial fee for the delivery of the service, taking into account the fact that BRPbsp was exposed (and needs to be compensated via the BSP) to the imbalance tariff for the requested volume of flexibility by Elia (see

²⁵ Hypothesis taken for the example

²⁶ The same modalities apply as in an opt-out situation, as described in section 8.2 of the ToE-rules which can be consulted on Elia's website via the following link: <http://www.elia.be/en/products-and-services/balance/transfer-of-energy>

step 7). Note that in the current Opt-out mechanism a similar agreement must exist between the BRP-source, Supplier, the BSP and the BRPbsp.

As a result both BRPsource and Supplier don't find any impact due to activation by a third party aggregator. As a result:

1. In the current Opt-out mechanism the impacts of the activation on the supplier, the BRPsource and the BRPbsp are managed through an agreement between the BRPsource, the Supplier, the BRPbsp and the BSP. In this future variant of the Opt-out mechanism the impacts are resolved as follows:
 - the impact of the activation on the BRPsource and the Supplier is "transferred" to the end-user via the pass-through contract;
 - The remaining impact on BRPbsp is managed through an agreement between the end-user, the BSP and the BRPbsp.
2. The pass-through contract holder is free to join a BSP pool without prior consent of the supplier and BRPsource. The pass-through contract holder, as owner of his own flexibility, always carries the responsibility of imbalances himself via the pass-through contract.
3. The supplier and BRPsource do not have to be informed about the activation of flexibility in such a market construction, since they are not impacted by an action of a third party aggregator and since the holder of the pass-through contract is always by this contract allowed to divert from his nomination.

Part II: Proposition for the implementation plan for the separated procurement of FCR and aFRR

3 Implementation plan for the separated procurement of FCR and aFRR

3.1 Introduction

In this chapter, the proposition for the implementation plan for the separated procurement of FCR and aFRR is described based on the analysis performed in the studies “Separate procurement of FCR and aFRR products”²⁷ and “new aFRR design”.

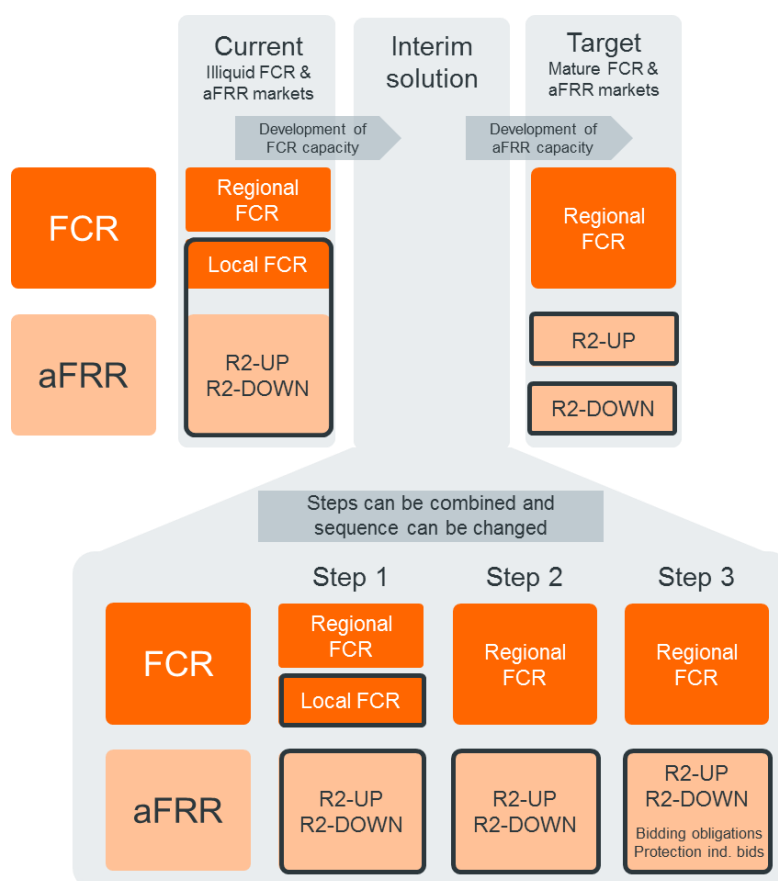


Figure 6 Potential steps to arrive to the target solution for the separated FCR and aFRR procurement as described in the study²⁷.

Steps 1 and 2 of Figure 6 are skipped and a full merge with FCR Cooperation is foreseen for the following reasons (more information can be found in chapter 4.2 of the “study on the separated procurement of FCR and aFRR”²⁷):

- It is requested by the stakeholders during the public consultation to reduce the number of adaptations in the market. This creates a more stable environment for BSP investments.
- 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

²⁷ The study on separate procurement of FCR and aFRR products has been consulted and the final report can be found here: <http://www.elia.be/en/about-elia/publications/Public-Consultation/Archives/Formal-public-consultation-regarding-a-study-on-Separate-procurement-of-FCR-and-aFRR-products>

of the go-live 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.

- Decoupling the two markets faster will facilitate new entrants by removing the interdependence of the markets.
- Having the aFRR market separated of FCR will allow the implementation of bidding obligations in aFRR up and down procurement in a simpler way by avoiding a third dimension as explained in chapter 4.4.4 of the “study on the separated procurement of FCR and aFRR products”¹⁹.

In this chapter, a more detailed implementation plan is provided for step 3 and further details on the proposal for the aFRR capacity tender can be found in Section 1.4. Based on the conclusions of the study on the separate procurement of FCR and aFRR products with regards to the exclusive asymmetrical procurement aFRR up and aFRR down, the implementation plan that is presented in this chapter, does not contain a concrete timing as there are too many uncertainties on when the conditions to split will be met.

In addition, Elia has organized a public consultation for a proposal towards CREG for the exemption from the obligation to procure upward and downward balancing capacity for aFRR separately, including a timing that will force to revisit this decision. At the time of writing this implementation plan, the feedback of the stakeholders is not yet known.

3.2 Evolution of contractual and regulatory framework for FCR and aFRR

3.2.1 Terms and Conditions BSP aFRR and Terms and Conditions BSP FCR

The T&C BSP FCR and T&C BSP aFRR need to be updated in the framework of separated procurement of FCR and aFRR. An update of the T&C BSP FCR is needed for the shift to the regional procurement. The T&C BSP aFRR need an update for the capacity tender as described in Section 1.1

The update of both T&C BSP FCR and T&C BSP aFRR will need to follow predefined steps as stated below with (indicative) timings:

- Development of the T&C BSP aFRR and T&C BSP FCR: maximum 4 months
- Organization of a public consultation: one month
- Rework feedback of the public consultation: one month
- Regulatory approval: at least 6 months
- In case of request for amendment formulated by the regulator: 2 months for new proposal by Elia and 2 months for NRA approval as indicated in article 6 of the Guideline on Electricity balancing
- Signing of the contracts: at least one month

The required update for the separated procurement of FCR and aFRR will be included in the updates of the T&C BSP for the new aFRR design as described in section 1.4.1.

The signing of the relevant contracts is required before the testing during the prequalification process can start.

3.2.2 Balancing rules for FCR and aFRR

The implementation of the separated procurement of FCR and aFRR could require an update of the balancing rules.

The update of the balancing rules will need to follow predefined steps as stated below with (indicative) timings:

- Development of the balancing rules: maximum 2 months
- Organization of a public consultation: one month
- Rework feedback of the public consultation: one month
- Regulatory approval: at least 6 months, since Elia assumes the same regulatory approval duration as for the T&C BSP.

The required update for the separated procurement of FCR and aFRR will be included in the updates of the balancing rules for the new aFRR design as described in section 1.4.1.

3.3 IT implementation for FCR and aFRR

A complete new tool will need to be developed for the aFRR capacity procurement. FCR and regional cooperation will be merged from the go-live of the new aFRR design.

3.4 Implementations on market side for FCR and aFRR

For aFRR, a daily procurement will be put in place with new bidding obligations. For the current aFRR providers, the transition from a weekly procurement for aFRR to a daily procurement has an operational impact.

3.5 Timelines for FCR and aFRR

Taking into account the timings as indicated in Section 3.2 for the contractual and regulatory framework and 3.3 for the IT implementation, the timing below is elaborated:

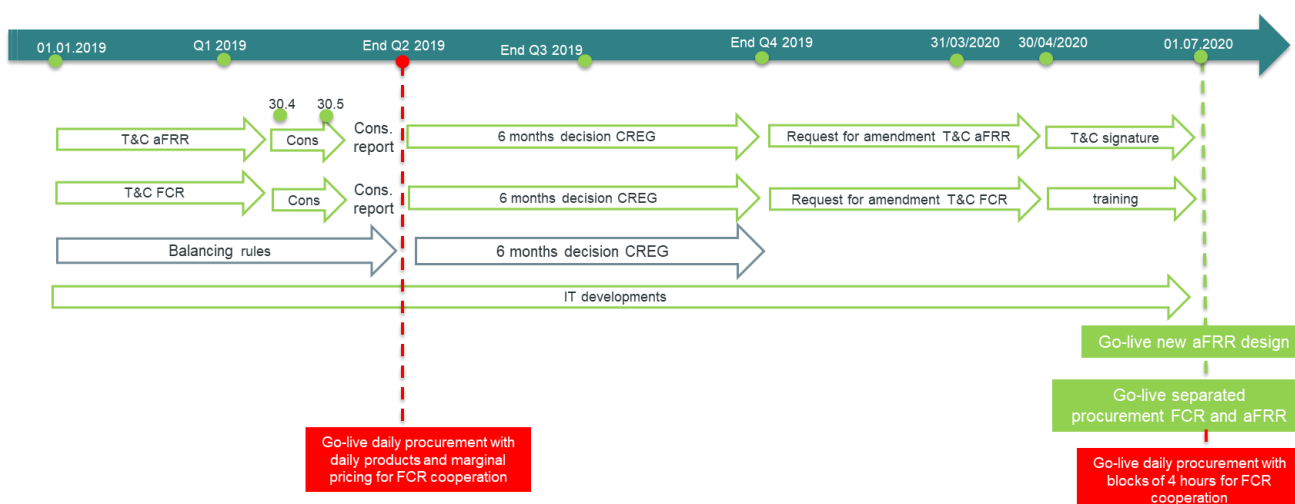


Figure 7: Timeline for the separated procurement of FCR and aFRR with a go-live in July 2020.

Based on all elements known today and taking into account the complexity of the new aFRR design project, Elia anticipates a go-live on the 1st of July 2020 and a start of the prequalification as from May 2020. The go-live of the separated procurement of FCR and aFRR and the go-live of the new aFRR design as explained in Chapter 1 are inherently linked and the go-live of both implementations have to occur at the same moment. Besides, the go-live of the separated procurement of FCR and aFRR products will be aligned with the go-live of the daily procurement with blocks of 4 hours for the FCR cooperation.

Elia fully recognizes the importance for market parties to have adequate foresight on a firm go-live date (both for commercial as well as for technical reasons). Whilst Elia will deploy all reasonable efforts to stick to the foreseen go-live date, a delay may however not be excluded.

Elia has investigated an earlier go-live of the new aFRR design, as indicated in Section 1.5.6; enabling an earlier implementation of the separate procurement of FCR and aFRR reserves. Although these timings could be possible from an operational point of view, given the considerations explained in that section, these timings have not been withheld as a viable option.

Elia has submitted for approval to the CREG the first set of T&C BSP FCR and T&C BSP aFRR on 18 June 2018 as required by the Guideline on Electricity Balancing. At this moment, the CREG has not yet taken any decision on this matter. As long as the T&C BSP FCR and T&C BSP aFRR have not been approved, the GFA FCR CIPU, GFA FCR non-CIPU and GFA aFRR CIPU for technical units will continue to be applied.

For the separated procurement of FCR and aFRR, an update of the T&C BSP for FCR and aFRR already submitted for approval is required as presented in Figure 7. It is the assumption of Elia that by the time Elia will ask for approval for the changes to the T&C BSP aFRR, a final decision will have been made by CREG on Elia's initial proposal. In the above planning, the assumption has been taken that this will have taken place by the end of April 2019. Please note that EBGL foresees no binding approval timings and also provides the possibility for regulators to ask for a Request for amendment, which would potentially impact above timings.

Even without a final decision Elia is able to organize a consultation on the T&C BSP FCR and T&C BSP aFRR updated for the separated procurement of FCR and aFRR. But nevertheless, above timing for this consultation is planned for May 2019, so after the assumed decision date of CREG. In this implementation plan, it is also considered that the capacity tender as it is proposed in section 1.1 is implemented.

3.6 Integrated Implementation plan for aFRR & mFRR

All the details of the integrated implementation plan is explained in Section 1.5.