

WG Balancing of 23rd November 2020

Teleconference

23/11/2020

For a smooth teleconference with 30+ people ... Some rules apply

- Please put yourself on mute at any time that you are not speaking to avoid background noise.
- If you receive a call, please ensure that you do not put this meeting **on hold**.
 - You can quit and reconnect later on.
 - You will be muted or kicked out of the session, if necessary.
- You will be requested to hold your questions for the end of each presentation.
 - Should you have a question, please notify via Skype or speak out if you are only via phone.
 - Share your question (with slide number) in advance so all participants may follow
 - Before you share your question, please announce yourself.
- If you have a poor internet connection, please dial-in.
- Finally, please be courteous and let people finish their sentences.
 - It is practically impossible to follow when 2 people are speaking at the same time in a teleconference.



Agenda

1. 13:00 – 13:10 – Introduction and Validation of minutes
2. 13:10 – 13:20 – Smart Testing: Consultation Report
3. 13:20 – 13:30 – PAC Study: Consultation Report
4. 13:30 – 13:45 – DA Balance Obligation: Implementation Plan
5. 13:45 – 14:05 – Roadmap 2021-2022: update
6. 14:05 – 14:20 – Balancing Publications at Elia.be
7. AOB
 - EU Balancing: design workshops - update
 - LFC means consultation

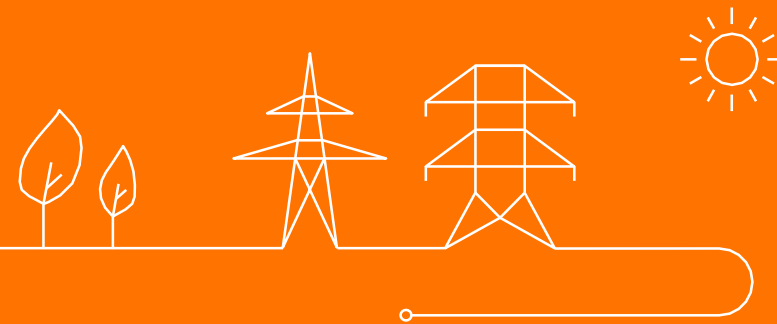
Minutes of Meeting for approval

- Minutes of Meeting of 24th September 2020 and Smart Testing:
 - Minor comments have been received from Eneco to correct typos and clarify an aspect on the impact of the UK-BE border on LFC means.
 - Elia suggests to approve the MoM of 24th September and Smart Testing Workshop
- Minutes of Meeting of 28th October 2020
 - No comments from stakeholders.
 - Elia suggests to approve the MoM of 28th October.



Smart Testing: Consultation Report

Presented by Didier Chim



Smart Testing: Summary of the feedback from public consultation

The public consultation on Smart Testing took place between 15th September and 15th October.

4 non-confidential feedbacks were received from:

- FEBEG
- Febeliec
- Centrica Business Solution
- Flexcity

General comments and feedback on implementation were presented during the WG Balancing of 28/10/2020



Smart Testing: Summary of the feedback from public consultation

Specific Feedback on Scoring Systems:

- Several clarification questions have been asked by the stakeholders and will be taken into account in the final report. The following slides highlight the main points of interest or disagreement.
- *FEBEG questions the applicability of the Scoring System for aFRR and FCR.*
 - Based on the **current designs of aFRR and FCR products** and related input data, Elia believes that the **margin analysis scoring may be computed** for aFRR and FCR, **in line with the proposed methodology**. The implementation details will be sorted out during the implementation phase of the relevant product.
- *Flexcity asks how Elia identifies the Unsheddable Margin*
 - **The Unsheddable Margin (UM) is based on the lowest offtake (consumption) value for the considered 12 months rolling window.** Elia is aware of the consequences of not taking maintenances into account, which can artificially reduce the UM. **The calculation of the UM may be improved with later phases of iCAROS project** (e.g. by excluding maintenance periods in the calculation).



Smart Testing: Summary of the feedback from public consultation

Specific Feedback on Scoring Systems:

- *Flexcity shares that thermal plants will never a Negative Margin (except in case of forced outage at start-up). A 95% reliable standby thermal plant will have better scores then a 95% reliable DSM profile. Thus, the Margin Analysis is not technology neutral.*
 - *Elia disagrees with the analysis of the stakeholder regarding the technological neutrality. Margin analysis is designed to capture the potential inability of the BSP to provide their obligation regardless of the underlying assets. To continue with the example of the stakeholder, **the only difference between thermal plants with a 95% availability rate and a 95% reliable DSM profile is the distribution of the inability to fulfill the obligation.***
- *Flexcity shares that for mFRR, Margin Analysis might need to be calculated differently for BSPs using a “high X of Y baselining”*
 - *The margin score and all scores are designed to provide **an indication to Elia** on whether **to test a certain bid or CCTU**. It **does not impact the success or failure of an activation control**. An activation control is taken into account in the test regime calculation if it effectively meets the requirements as set forth in the T&C mFRR, according to the baselining method chosen by the BSP. Elia does not share the concern of the stakeholder and **does not see the need to amend the proposed methodology as a starting point**. Elia may consider amendments after a return of experience or based on further clarification from the stakeholder on their concerns.*



Smart Testing: Summary of the feedback from public consultation

Specific Feedback on Test Regimes:

- Many stakeholders request a limitation of the number of tests in the first test regime.
 - *Elia will keep the limitation of 12 tests per rolling window of 12 months for the first test regime.*

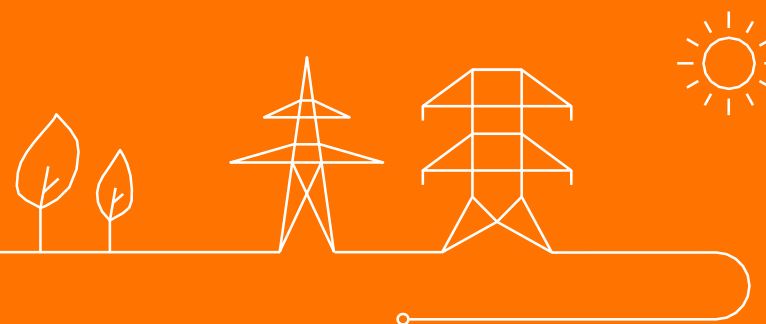
Specific Feedback on other topics:

- Febeliec requests a confirmation that Elia will not inappropriately apply tests in order to avoid actual activations for balancing.
 - *Elia confirms that the introduction of **Smart Testing** does not change how tests are performed. The tests are pre-programmed and are therefore **uncorrelated with the situation of the grid at the moment of the test**. Elia may still decide to **cancel a programmed test** if the performance of such test **may endanger operational security limits**.*
- (Out of scope) FEBEG asks Elia to consider the possibility to trigger availability test both via XML and SCADA signal.
 - *The comment of the stakeholder is out of scope of this consultation. Elia invites the stakeholder to refer to the answer provided in the **public consultation of T&C BSP FCR (March 2020), section 4.6 Availability test**, related to the same comment.*



PAC Study: Consultation Report

Presented by Sofie Van den waeyenberg



Stakeholder consultation of study: From 1/9 until 1/10/2020

Elia performed a **study on “Paid-as-cleared vs. paid-as-bid remuneration for aFRR & mFRR capacity”** and published the preliminary study report for public consultation.

Consultation webpage: open until 1 October 2020

https://www.elia.be/en/public-consultation/20200901_public-consultation-on-the-study-on-pay-as-bid-vs-pay-as-cleared

- Elia requested stakeholder feedback on the study in general and specifically regarding the following:
 - Importance of this topic in the design of the balancing products. Level of priority vis-à-vis other upcoming design changes.
 - Assessment of current market readiness for aFRR capacity and for mFRR capacity
 - If change to paid-as-cleared remuneration: feedback on the specific designs proposed for aFRR and mFRR
 - Insight in possible workload on stakeholder side and preparedness to work on implementation, including indication of timing (before, at the same time as, or later than the PICASSO/MARI projects)?
- Elia has also organized a workshop on this study on 15 September 2020.

The slides are available online:

https://www.elia.be/-/media/project/elia/elia-site/ug/workshop/20200915_pac-frr-capacity-workshop-slides.pdf



Consultation responses

Four non-confidential responses received from:

- Febeg (elaborated – see next slides)
- Febeliec (elaborated – see next slides)
- Centrica Business Solutions (elaborated – see next slides)
- Paul Verheecke (positive but not elaborated)

Next slides give a high-level overview of stakeholder feedback. The individual stakeholder comments as well as the consultation report with Elia responses to all feedback and the final study report will be published at the latest by December 23, 2020



Summary feedback per stakeholder

Febeliec

- In support of the study: PAC is indeed interesting, but not a priority. The market indicators do not seem reassuring and the period for analysis was too short.
- Important message: PAC is only acceptable if no additional costs have to be borne by the consumers.

Febeg

- PAC for FRR capacity can be the target design but is not a priority: implement at the same time as MARI or even later.
- In support of our theoretical assessment of PAB and PAC.
- Emphasis that the current PAB design works fine as well:
 - All BSPs should be able to do a minimum of market forecasting.
 - Elia is very transparent: the current publications reduce the difficulties for BSPs to get to know the market.
- Quantitative analysis: A period of 2 years would be preferable to analyze before drawing any conclusions.

Centrica

- PAC should be implemented as quickly as possible.
- PAB is more difficult for aggregators.
- The market will not evolve towards more liquidity due to the complexity of the balancing market in general. On the contrary, delaying PAC may cause some volume that is currently offered to leave the market.
- Even with an increase of procurement costs shortly after the introduction of PAC, the long-term cost-benefit analysis would give positive results.



Stakeholder feedback per topic

Theoretical section

Overall feedback in support of the theoretical assessment: both PAB and PAC have benefits and drawbacks but different attention points.

- **Centrica:**
 - Difficulties for price determination in PAB context are not to be underestimated (different investments and cost structure of aggregators)
 - In PAB design more information needed to correctly forecast market price and set a capacity bid price.
- **Febeg:**
 - Difficulties for price determination in PAB context should be manageable by all BSPs, especially given the extended available information.

Quantitative analysis

Febeliec/Febeg: support the proposal re-analyse the market situation after more mFRR experience (larger data set)

- **Febeliec:**
 - Concerned by cost increase: better to await other design evolutions that would improve liquidity and together with this design change limit the impact on consumers
 - When would liquidity be sufficient?
- **Febeg:**
 - Complexity of balancing market may not quickly result in increased liquidity & competition even with PAC.
 - Impact of winter period?
- **Centrica:**
 - Price impact may not be the only argument to decide on design
 - Risk of losing liquidity due to PAB
 - Long-term CBA of PAC would be positive

Hypothetical design proposals for aFRR and mFRR

Overall feedback in support of the design proposals (if a PAC design would be decided)

- Supported by **Febeg**
- Supported by **Febeliec** but request for clarification of difference between mFRR Std and mFRR Flex
- No comments from **Centrica**



Stakeholder feedback regarding implementation timing

- More analysis needed before deciding to go through with this design change (Febeliec, Febeg)
- IT workload impact at BSP side is substantial: implementation timing should be discussed sufficiently in advance, but more information is needed for a better assessment of IT impact (Febeg)
- Neither essential nor urgent in the short to medium term (Febeg)
- PAC as soon as possible, regardless of liquidity assessment (Centrica)



Conclusions after public consultation

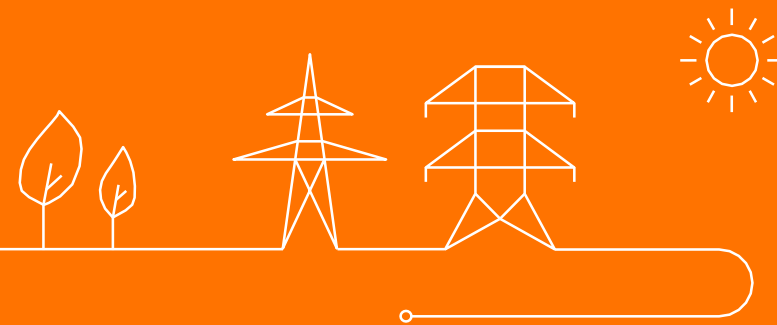
Based on the feedback received in the public consultation as well as discussions in the framework of the presented balancing roadmap, the proposals remain for finalization of the study:

- **mFRR**: re-assess market readiness in Q2 2021 & evaluate implementation impact (at BSP and Elia side) to decide whether PAC would be introduced in the next design review (entry into force with explicit bidding/MARI connection) or later.
- **aFRR**: First experience needed with new design and achievement of target of ‘minimum liquidity’: re-assess market readiness 6 months after phase-out of “all CCTU” auction.



DA Balance Obligation: Implementation Plan

Presented by Anna Tsiokanos



Status of project

- Public consultation is finished
- Reactions received from:
 - EFET
 - EPEXSpot
 - FEBEG
 - Febeliec
 - RWE
 - + 4 confidential reactions (traders but also physical BRPs)
- Elia is currently analyzing all reactions and preparing individual answers in a consultation report
- Final study as well as consultation report will be submitted to the CREG by end of 2020. Non-confidential versions of the study and the report will be published on Elia's website
- **Goal of this presentation:**
 - ⇒ provide first HL feedback on reactions received
 - ⇒ provide more clarity on Implementation plan for which questions were raised during the public consultation

Main highlights from non confidential reactions

General position regarding Elia recommendation to relax the DA balance obligation

- Majority of respondents is in favor of the relaxation of the DA Balance obligation
- Febeliec is against
- Febeg is not convinced and finds that advantages of relaxing the DA balance obligation are not sufficiently demonstrated but has no strong objection;
- All market parties agree that the relaxation of the DA balance obligation could have positive effects (at least in theory)

Implementation plan:

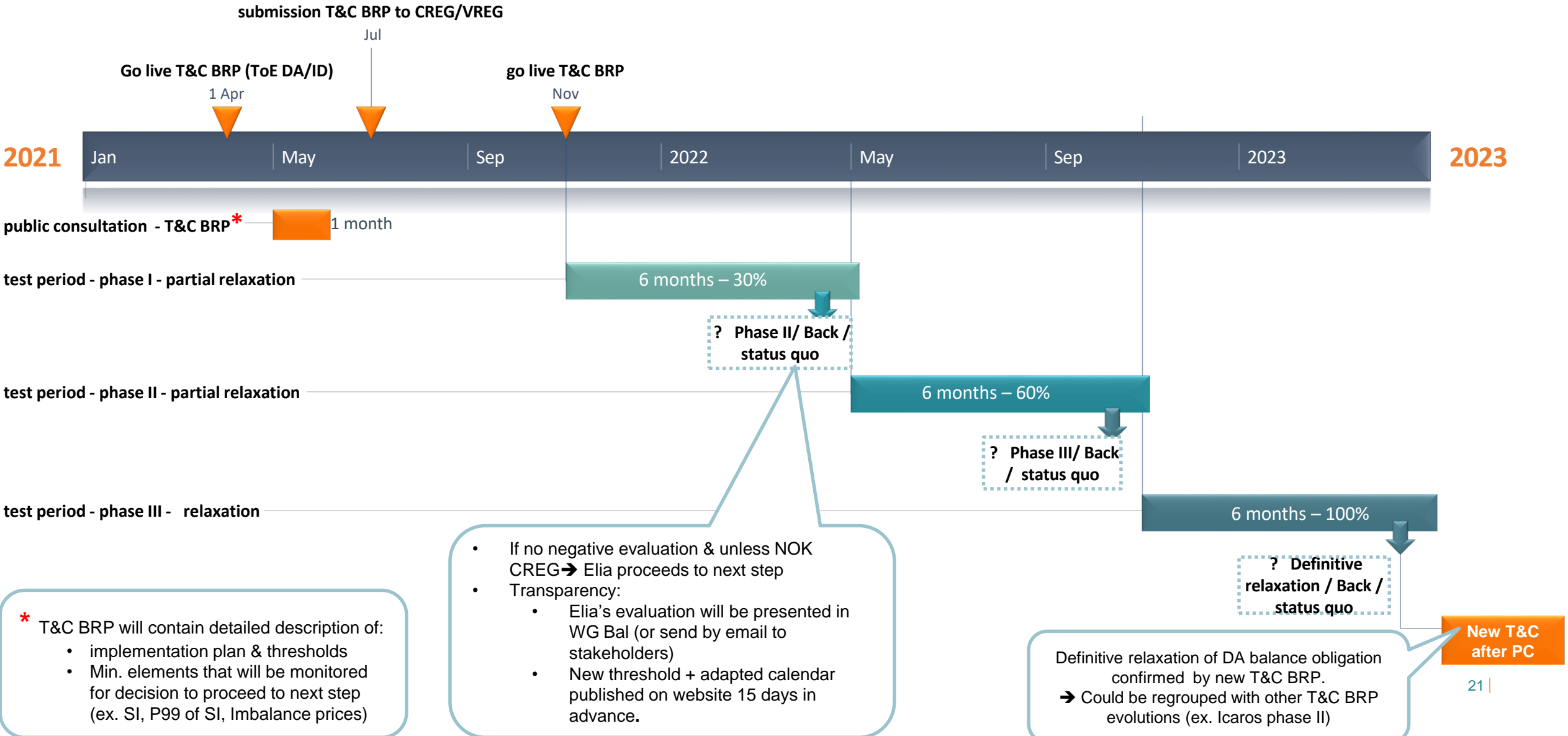
- Majority of market parties agree with a [careful, prudent and stepwise implementation](#), in order to gradually relax the DA balance obligation [at the condition that the return of experience is positive](#).
- Market parties [ask more details](#) and clarity regarding the details of this stepwise approach.

In addition following elements raised questions and reactions:

- Liquidity: important that Elia continues working on improvements of the (XB) ID market;
- Reasoning for relaxation of the DA balance obligation (more particularly arguments listed in section 7);
- Concerns regarding the risk on the SI and risk on the DAM price as reference price.

Who	General position	Phased implementation
Febeliec	●	●
FEBEG	●	●
EFET	●	●
EPEXspot	●	●
RWE	●	●

Elia's recommendation for Implementation plan



Determination of threshold (still under analysis)

- Threshold per BRP: proportionate to “BRP’s portfolio size” :
 - maximum in Y-1 of the daily average of “physical offtakes(+ grid losses) + sales”
 - Note this calculation is also used to dimension the bank guarantee
 - Threshold fixed for each BRP for the entire test period based on size of his portfolio during last 12 months
- Phase I: threshold = 30%* of BRP’s portfolio size
- Phase II: threshold = 60% of BRP’s portfolio size
- Phase III: threshold = 100% of BRP’s portfolio size

*rounded values

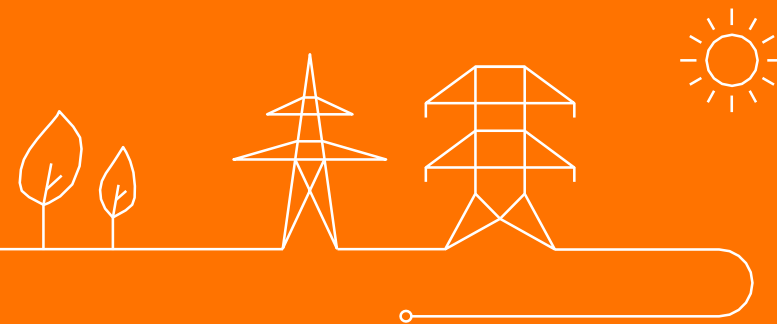
Similar calculation used
for calibration of the
bank guarantee

More particularly, following elements are subject to reactions:

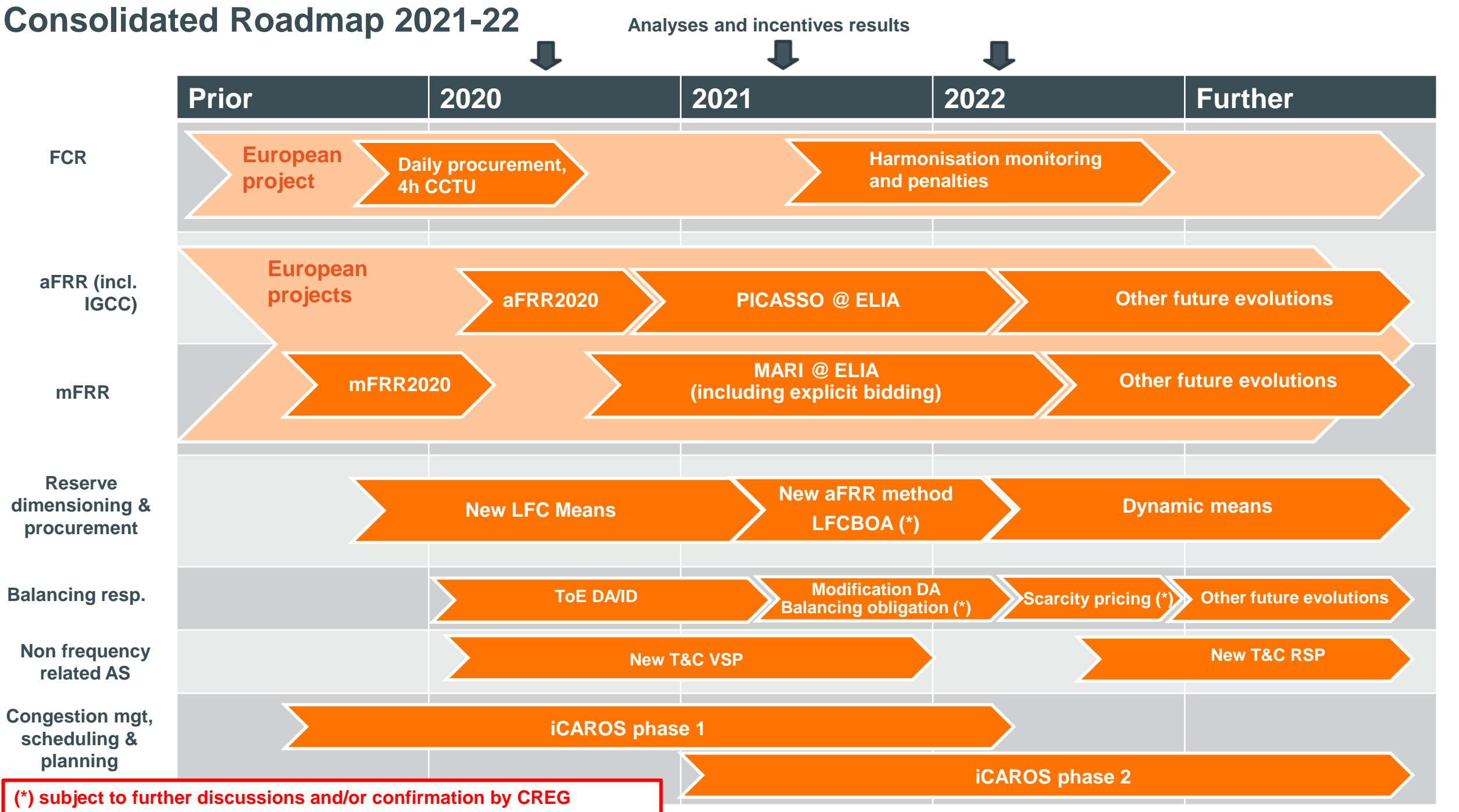
- Liquidity: several market parties remind that the liquidity of DA/ID market is provided by market parties and won't increase by the proposed measure alone. Besides that it is important that Elia continues working on improvements of the (XB) ID market;
 - ⇒ Elia agrees that the potential benefits (liquidity but also price convergence, market power decrease as observed in the US) can be reached by open positions that BRPs take in DA in good anticipation of the ID conditions. The relaxation of the DA balance obligation enables such optimizations by BRPs. If market parties don't take open positions in DA (because they consider there is no liquidity in ID) there will be no change compared to today.
 - ⇒ Elia is of the meaning that the relaxation of the DA balance obligation comes in // as a complementary measure to all the other improvements of the (XB) ID market Elia is working for.
- Reasoning for relaxation of the DA balance obligation: some market parties question observations listed in chapter 7 of the study and question whether those observations are good reasons to relax the DA balance obligation.
 - ⇒ Observations in chapter 7 question the relevance of the current DA balance obligation, the recommendation to relax comes after analysis of all potential evolutions.
 - ⇒ DA balance obligation is not strictly necessary: not imposed by other TSOs, not necessary for Elia's security analyses & can even incentivize BRPs to provide bad quality information
 - ⇒ DA balance obligation has disadvantages: no level playing field between all BRPs
 - ⇒ Some benefits could be reached by relaxing the DA balance obligation (as observed in CAISO & PJM); those depend on BRPs' behavior
- Concerns regarding the risk on the SI and risk on the DAM price as reference price:
 - Elia does not agree with Febeliec: with the evolution of ID markets, the increase of renewables and the flexibility in the markets, the DA market price (=photo taken 10-34 hrs before RT) will become less representative of the final market conditions. Allowing BRPs to take DA open positions will on the contrary allow them to anticipate ID market conditions and therefore allow a DA price closer to the ID market conditions.
 - As described in the study, a massive wrong bet by BRPs in DA combined with low liquidity in ID could have negative effects on the SI. But this risk is deemed very low as it is very unlikely that BRPs take large open positions in Day-ahead when tense situations/poor Intraday liquidity are expected, since the financial risk taken by the BRPs would be too important.
 - The phased approach with a partial relaxation of the DA balance obligation aims at keeping this risk under control and verifying the conclusions of the study.

Balancing & Belgian Markets: Roadmap 2021-22 (update)

Presented by Cécile Pellegrin



Consolidated Roadmap 2021-22



Feedbacks (1)

- Feedback has been received from FEBEG and Febeliec since last WG Balancing. It allows to confirm and complement the feedbacks given by stakeholders during last meeting

General feedback

- Appreciation and importance of having such a roadmap
- Would welcome an overall consolidated roadmap (further than WG BAL)
 - Elia: Roadmaps are developed per WG – a consolidated view of all consultations will be presented in next UG
- Importance of the coordination with market parties and of visibility on coming technical workload
 - Elia: Well noted. See also here after
- Sufficient time need to be provided for consultations (taking into account externalities such as holiday period)
 - Elia: Look on possible “flexibility” for consultations period (in particular for MARI/PICASSO/iCAROS on one side and for baseline review/multiple BRPs) – see slide 5
- Engage earlier in scope definition and ambition of market studies linked to incentives (Febeliec)
 - Elia: Well noted- a discussion on this will be put on the agenda of the next WG BAL



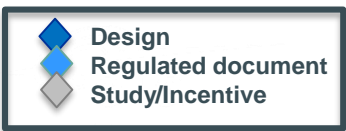
Feedbacks (2)

Topic specific

- PICASSO, MARI and iCAROS phase 1 are effectively highest priorities (FEBEG & Febeliec) – request for contingency plan in the event of delays
 - Elia: contingency plan will be elaborated by end Q1 2021
- Relaxation DA Balancing obligation, not a priority (FEBEG) or not needed (Febeliec) – however recognize that this may be wanted by some other market participants (FEBEG) – if taken forward, a stepwise approach is recommended (FEBEG & Febeliec) and it should be done in a way that doesn't impact current BRP' processes (FEBEG)
 - Elia: Topic still subject to discussion with CREG – it is however confirmed that this change will not impact BRPs
- Improvements in non frequency related products is not a priority (FEBEG)
 - Elia: well noted and accounted for Black Start – MVAR change management will be determined by law change calendar
- Scarcity pricing: no need on short term as not justified by any system need (FEBEG & Febeliec)
 - Elia: Topic still subject to discussions with CREG
- In addition, FEBEG pointed out to the need to address following backlogs
 - BMAP necessary evolutions => Will be seen in the context of MARI/PICASSO implementation
 - Settlement UI => Partly for end 2020, partly for end Q2 2021
 - aFRR control requests => Early Q2 2021



Indicative planning of related consultations



CRM Market Rules
consultation

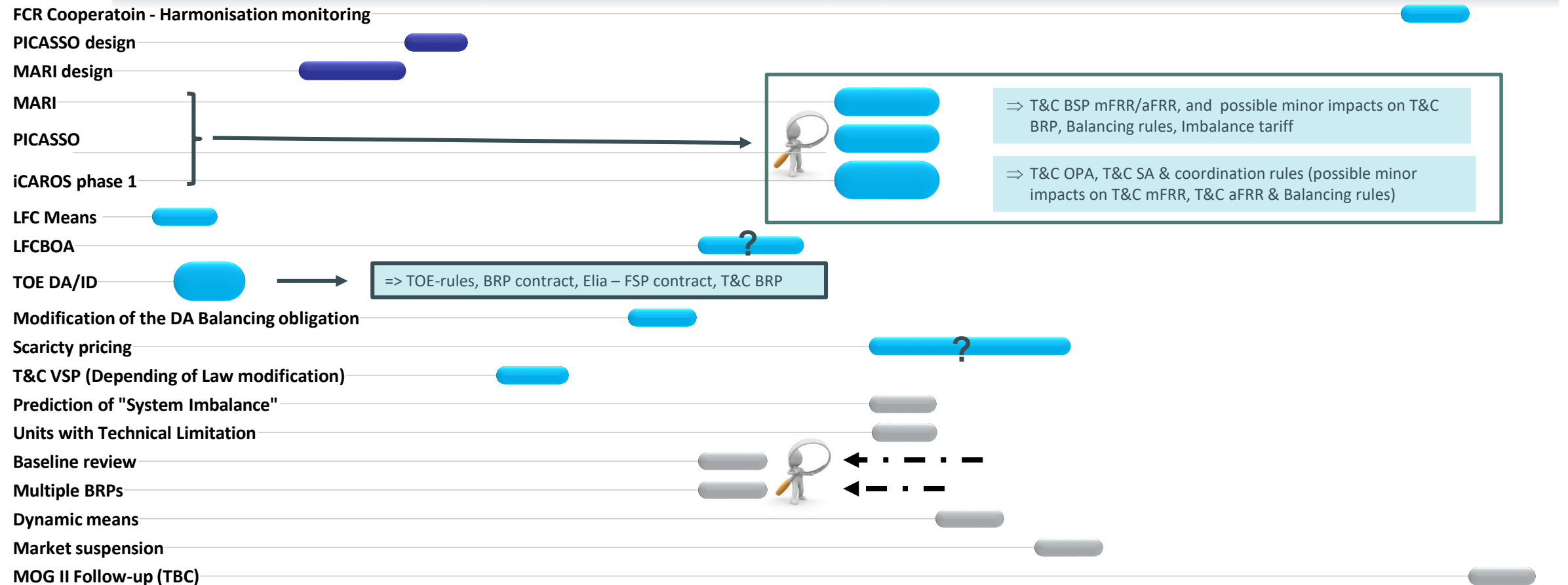
Go live explicit mFRR/iCAROS

Go live PICASSO

Go live MARI

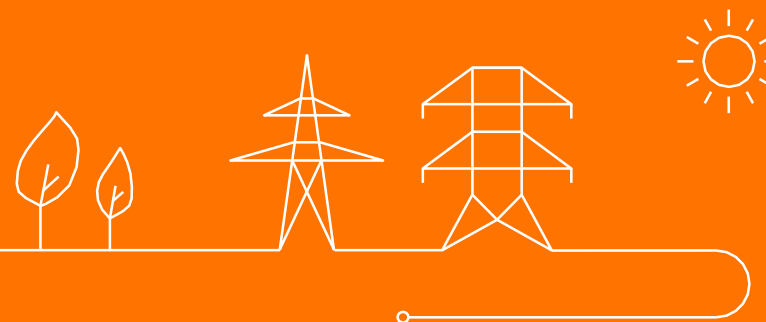


Go live ToE in DA/ID

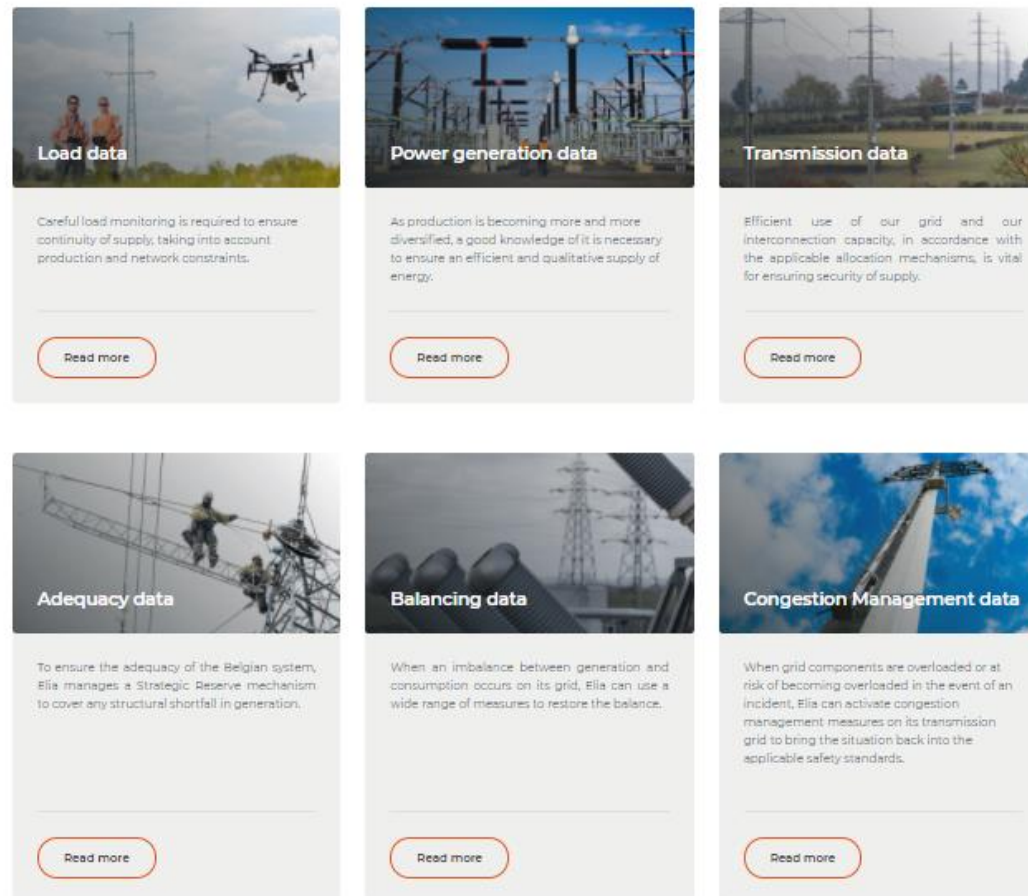


Balancing Publications at Elia.be

Presented by Simon Hardy



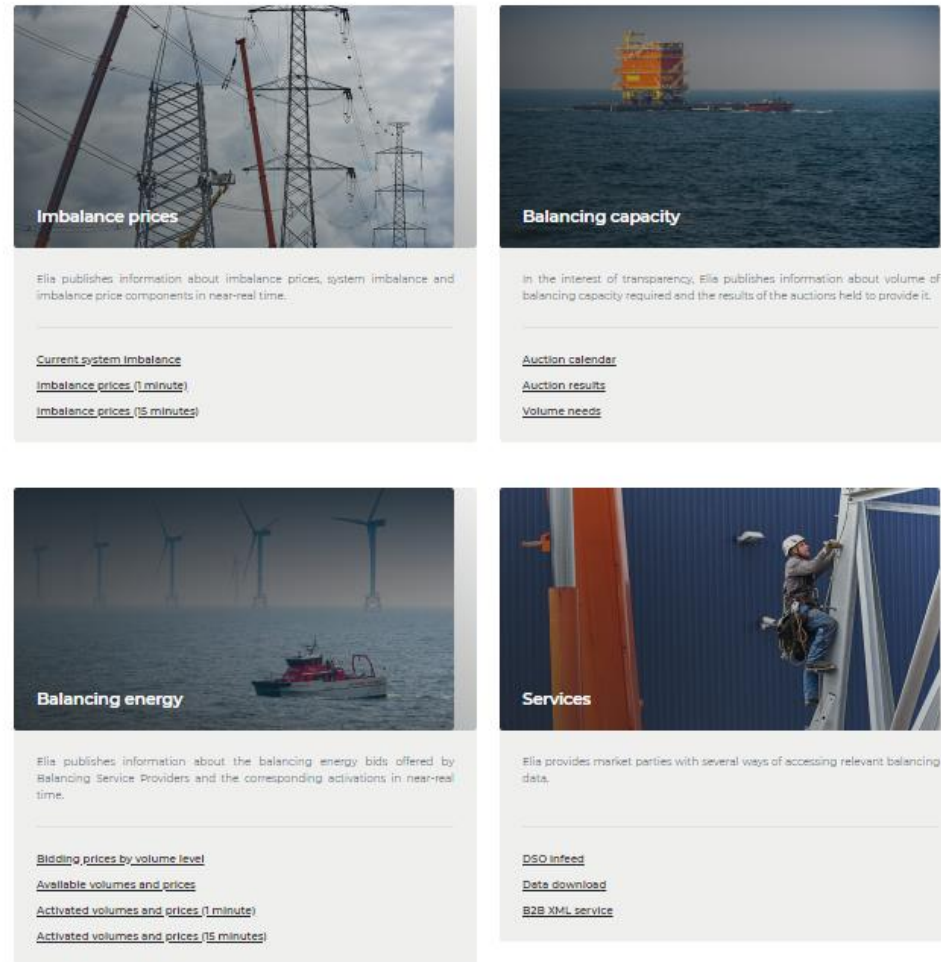
Elia.be – New look



Path on Elia website : <https://www.elia.be/en/grid-data>



Elia.be – New look



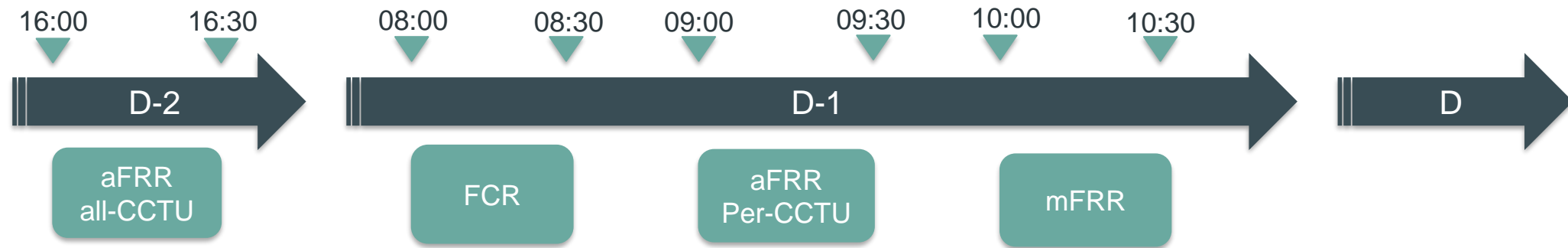
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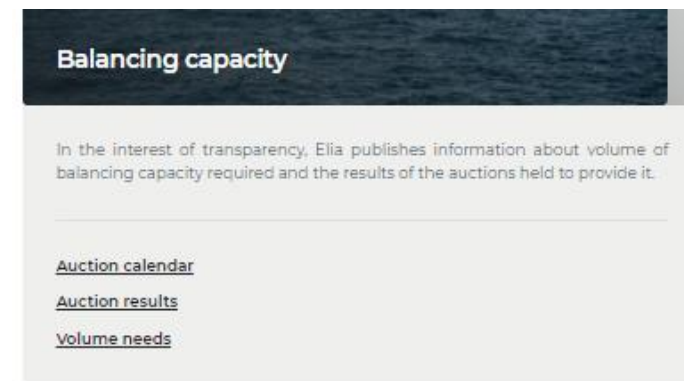
Capacity Auction

3 Balancing Products : FCR (ex-R1), aFRR (ex-R2) and mFRR (ex-R3)

-> All procured on a daily basis (as of 29/09/2020)

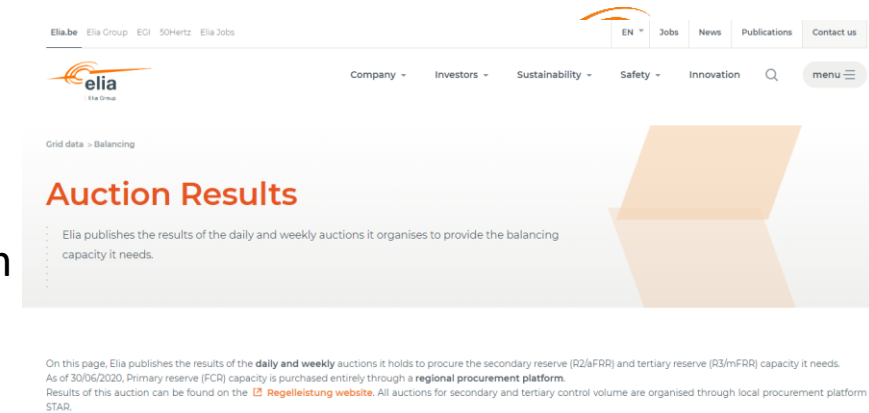


Daily auction results are published as soon as each auction is ended by Elia (max 30' after the GCT)



Capacity Auction – Zoom FCR

As of 30/06/2020, FCR is purchased entirely through a regional platform
<https://www.elia.be/en/grid-data/balancing/capacity-auction-results>



The screenshot shows the REGELLEISTUNG.NET - DATA CENTER interface. The left sidebar contains filters for Product type (FCR, mFRR, aFRR), Market (Balancing capacity, Balancing energy), and Delivery day (2020-11-10). The main content area displays 'FCR Capacity market R1' with a purple progress bar. Below this, 'FCR Capacity market R1 - Tender Details' are shown, including Product type (FCR), Tender type (Daily), Tender period (11/10/2020 - 11/10/2020), Run number (1), Bid offering deadline (11/9/2020 8:00 AM), and Allocation deadline (11/9/2020 8:30 AM). A 'Demands' section follows, with a table of demands by product names and countries, including transfer capacities and core demands.

Control Block	NEGPOS_00_04	NEGPOS_04_08	NEGPOS_08_12	NEGPOS_12_16	NEGPOS_16_20	NEGPOS_20_24
> Austria	68	68	68	68	68	68
> Belgium	78	78	78	78	78	78
Transfer Capacity	100	100	100	100	100	100
Core Demand	24	24	24	24	24	24

Information available :

- Volume needs (total, core share, export limit)
- Auction Results (Volume & Price)
- Individual capacity bids



Capacity Auction – Zoom aFRR

Volume needs

Auction calendar

Auction results

Volumes needs

Volume needs of FCR and aFRR Capacity

The table below shows the required volume for FCR and aFRR reserves, approved by CREG.

Required total volumes for year 2020 [MW]	
Primary Frequency Control (0s - 30s) <i>R1 – symmetrical – 200mHz</i>	78 MW
Secondary Frequency Control (30s – 15min) <i>R2 – symmetrical</i>	145 MW

[Elia Open Data License](#)

- Volume needs for aFRR = 145 MW
- Yearly value

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-volumes-needs>



Capacity Auction – Zoom aFRR

Volume needs

Auction calendar

Auction results

aFRR Auction calendar

From

11/11/2020

To

12/11/2020

Delivery Date	Delivery Period	Gate Opening	Gate Closing	Volume Demand Up (MW)	Volume Demand Down (MW)	Status	
11/11/2020	0 - 24	28/10/2020 00:00	09/11/2020 16:00	145	145	Ended	
11/11/2020	0 - 4	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	▲
11/11/2020	4 - 8	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	
11/11/2020	8 - 12	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	
11/11/2020	12 - 16	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	
11/11/2020	16 - 20	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	
11/11/2020	20 - 24	28/10/2020 00:00	10/11/2020 09:00	0	0	Ended	
12/11/2020	0 - 24	29/10/2020 00:00	10/11/2020 16:00	145	145	Open	
12/11/2020	0 - 4	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	
12/11/2020	4 - 8	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	
12/11/2020	8 - 12	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	
12/11/2020	12 - 16	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	
12/11/2020	16 - 20	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	
12/11/2020	20 - 24	29/10/2020 00:00	11/11/2020 09:00	0	0	Open	▼

Information per delivery day :

GOT, GCT

Volume demand (repartition between all-CCTU and per-CCTU)

Status of the auction (open, closed, ended)

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-auction-calendar>



Capacity Auction – Zoom aFRR

Volume needs

Auction calendar

Auction results

aFRR - Daily procurement

From

10/11/2020



To

10/11/2020



Tendering Period	CCTU	Capacity Product	Total Awarded Volume (MW)	Average Price (€/Mw/h)	Marginal Price (€/Mw/h)	Total Offered Volume	Individual Capacity Bids	
08/11/2020	10/11/2020 00:00 - 00:00	aFRR Downward	145	6.03	7.88	265	Individual bids	▲
08/11/2020	10/11/2020 00:00 - 00:00	aFRR Upward	145	16.67	24.88	265	Individual bids	
09/11/2020	10/11/2020 00:00 - 04:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 00:00 - 04:00	aFRR Upward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 04:00 - 08:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 04:00 - 08:00	aFRR Upward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 08:00 - 12:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 08:00 - 12:00	aFRR Upward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 12:00 - 16:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 12:00 - 16:00	aFRR Upward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 16:00 - 20:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 16:00 - 20:00	aFRR Upward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 20:00 - 00:00	aFRR Downward	0	0	0	0	Individual bids	
09/11/2020	10/11/2020 20:00 - 00:00	aFRR Upward	0	0	0	0	Individual bids	▼

Elia Open Data License

Information for each delivery day :

- Total awarded volume
- Average price
- Marginal price
- Total offered Volume
- Individual capacity bids

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-auction-results>



Capacity Auction – Zoom mFRR

Volume needs

Auction calendar

Auction results

Dynamic FRR needs and mFRR volumes

The table below shows the upward FRR needs and mFRR balancing capacity according to the new calculation method which will be used to determine the mFRR volumes to be procured as from the 'go live' of the new mFRR design. The results of the downward FRR needs are published ex post on trimestral basis as there is no procurement foreseen of downward mFRR balancing capacity.

17/11/2020			
Manual Frequency Restoration Reserve (mFRR) - upward	Needs [MW]		Volume [MW]
start period - end period	FRR Needs	mFRR Needs*	mFRR to be procured** : mFRR Standard*** + Flex
0 - 4	1045	900	850
4 - 8	1045	900	850
8 - 12	1045	900	850
12 - 16	1045	900	850
16 - 20	1045	900	850
20 - 0	1045	900	850

*mFRR needs = FRR needs - aFRR capacity

**mFRR to be procured = mFRR needs - 50 MW reserve sharing on mFRR

***A minimum volume of mFRR standard = Min(640 MW, mFRR to be procured)

- Volumes needs (min mFRR Std, mFRR Total)
- Daily allocation

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-volumes-needs>



Capacity Auction – Zoom mFRR

Volume needs

Auction calendar

Auction results

mFRR Auction calendar

From

16/11/2020



To

16/11/2020



Delivery Date	Delivery Period	Gate Opening	Gate Closing	Standard Volume Demand (MW)	Total Volume Demand (MW)	Status	
16/11/2020	0 - 4	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	▲
16/11/2020	4 - 8	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	
16/11/2020	8 - 12	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	
16/11/2020	12 - 16	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	
16/11/2020	16 - 20	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	
16/11/2020	20 - 24	02/11/2020 00:00	15/11/2020 10:00	640	850	Ended	▼

Information per delivery day :

- GOT, GCT
- Volume demand (Min Std volume, Total volume demand)
- Status of the auction (open, closed, ended)

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-auction-calendar>



Capacity Auction – Zoom mFRR

Volume needs

Auction calendar

Auction results

Tertiary Reserve – Daily Procurement

From

15/11/2020

To

15/11/2020

Tendering Period	CCTU	mFRR Product Type	Total Awarded Volume (MW)	Average Price (€/Mw/h)	Marginal Price (€/Mw/h)	Total Offered Volume	Individual Capacity Bids
14/11/2020	15/11/2020 00:00 - 04:00	mFRR Flex	100	0.55	0.6	240	
14/11/2020	15/11/2020 00:00 - 04:00	mFRR Standard	751	0.55	0.6	1151	
14/11/2020	15/11/2020 00:00 - 04:00	mFRR Total	851	0.55	0.6	1391	Individual bids
14/11/2020	15/11/2020 04:00 - 08:00	mFRR Flex	120	1.8	2.03	260	
14/11/2020	15/11/2020 04:00 - 08:00	mFRR Standard	731	1.83	2.04	1132	
14/11/2020	15/11/2020 04:00 - 08:00	mFRR Total	851	1.82	2.04	1392	Individual bids
14/11/2020	15/11/2020 08:00 - 12:00	mFRR Flex	102	5.72	6.98	242	
14/11/2020	15/11/2020 08:00 - 12:00	mFRR Standard	749	6.14	6.99	1152	
14/11/2020	15/11/2020 08:00 - 12:00	mFRR Total	851	6.09	6.99	1394	Individual bids
14/11/2020	15/11/2020 12:00 - 16:00	mFRR Flex	117	5.77	6.98	257	
14/11/2020	15/11/2020 12:00 - 16:00	mFRR Standard	734	6.16	6.99	1134	
14/11/2020	15/11/2020 12:00 - 16:00	mFRR Total	851	6.11	6.99	1391	Individual bids
14/11/2020	15/11/2020 16:00 - 20:00	mFRR Flex	117	6.19	7.78	257	
14/11/2020	15/11/2020 16:00 - 20:00	mFRR Standard	734	6.68	7.79	1140	
14/11/2020	15/11/2020 16:00 - 20:00	mFRR Total	851	6.62	7.79	1397	Individual bids
14/11/2020	15/11/2020 20:00 - 00:00	mFRR Flex	62	2.82	2.92	240	
14/11/2020	15/11/2020 20:00 - 00:00	mFRR Standard	789	2.78	2.99	1173	
14/11/2020	15/11/2020 20:00 - 00:00	mFRR Total	851	2.78	2.99	1413	Individual bids

[Elia Open Data License](#)


Information for each delivery day :

- Awarded volume (Std, Flex, Total)
- Average price
- Marginal price
- Total offered Volume
- Individual capacity bids

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/capacity-auction-results>




Elia.be – New look



Imbalance prices

Elia publishes information about imbalance prices, system imbalance and imbalance price components in near-real time.


[Current system imbalance](#)
[Imbalance prices \(1 minute\)](#)
[Imbalance prices \(15 minutes\)](#)



Balancing capacity

In the interest of transparency, Elia publishes information about volume of balancing capacity required and the results of the auctions held to provide it.


[Auction calendar](#)
[Auction results](#)
[Volume needs](#)



Balancing energy

Elia publishes information about the balancing energy bids offered by Balancing Service Providers and the corresponding activations in near-real time.

[Bidding prices by volume level](#)
[Available volumes and prices](#)
[Activated volumes and prices \(1 minute\)](#)
[Activated volumes and prices \(15 minutes\)](#)



Services

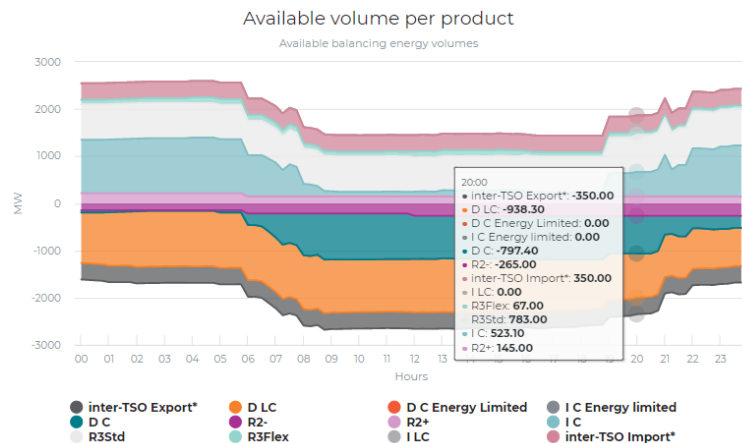
Elia provides market parties with several ways of accessing relevant balancing data.

[DSO infeed](#)
[Data download](#)
[B2B XML service](#)

Path on Elia website : <https://www.elia.be/en/grid-data/balancing>



Energy – Available volumes (and prices)



R2* : aFRR energy bids (contracted and non-contracted)

I C : Non-contracted mFRR Energy bids provided by DPSU

I C Energy Limited : Non-contracted mFRR Energy bids provided by DPPG

R3Std* : Contracted mFRR Standard Energy Bids

R3Flex*: Contracted mFRR Flex Energy Bids

I LC : Non-contracted Energy bids provided by LC DP

Inter TSO import : Available volume in the Inter-TSO (contractual value)

Quarter	Downward regulation					Upward regulation										inter-TSO Import* [MW]	Total [MW]
	Total [MW]	inter-TSO Export* [MW]	D LC [MW]	D C Energy Limited [MW]	D C [MW]	R2- [MW]	R2+ [MW]	I C [MW]	I C Energy Limited [MW]	R3Std [MW]	R3Flex [MW]	I LC [MW]					
00:00 > 00:15	-1614.3	-350.0	-1070.1	0.0	-49.2	-145.0	215.0	1132.5	0.0	750.0	100.0	0.0	350.0	2.547.5			
00:15 > 00:30	-1623.6	-350.0	-1079.4	0.0	-49.2	-145.0	215.0	1132.5	0.0	750.0	100.0	0.0	350.0	2.547.5			
00:30 > 00:45	-1632.8	-350.0	-1088.6	0.0	-49.2	-145.0	215.0	1132.5	0.0	750.0	100.0	0.0	350.0	2.547.5			
00:45 > 01:00	-1641.7	-350.0	-1097.8	0.0	-48.9	-145.0	215.0	1132.8	0.0	750.0	100.0	0.0	350.0	2.547.8			
01:00 > 01:15	-1671.0	-350.0	-1132.5	0.0	-43.5	-145.0	215.0	1137.9	0.0	750.0	100.0	0.0	350.0	2.552.9			
01:15 > 01:30	-1670.5	-350.0	-1137.0	0.0	-38.5	-145.0	215.0	1142.9	0.0	750.0	100.0	0.0	350.0	2.557.9			
01:30 > 01:45	-1669.9	-350.0	-1141.4	0.0	-33.5	-145.0	215.0	1147.9	0.0	750.0	100.0	0.0	350.0	2.562.9			
01:45 > 02:00	-1669.3	-350.0	-1145.8	0.0	-28.5	-145.0	215.0	1152.9	0.0	750.0	100.0	0.0	350.0	2.567.9			
02:00 > 02:15	-1698.1	-350.0	-1179.6	0.0	-23.5	-145.0	215.0	1157.7	0.0	750.0	100.0	0.0	350.0	2.572.7			
02:15 > 02:30	-1693.3	-350.0	-1179.8	0.0	-18.5	-145.0	215.0	1162.7	0.0	750.0	100.0	0.0	350.0	2.577.7			
02:30 > 02:45	-1688.5	-350.0	-1180.0	0.0	-13.5	-145.0	215.0	1167.7	0.0	750.0	100.0	0.0	350.0	2.582.7			
02:45 > 03:00	-1688.5	-350.0	-1180.0	0.0	-13.5	-145.0	215.0	1167.7	0.0	750.0	100.0	0.0	350.0	2.582.7			
03:00 > 03:15	-1684.2	-350.0	-1175.7	0.0	-13.5	-145.0	215.0	1167.2	0.0	750.0	100.0	0.0	350.0	2.582.2			
03:15 > 03:30	-1683.7	-350.0	-1175.2	0.0	-13.5	-145.0	215.0	1167.2	0.0	750.0	100.0	0.0	350.0	2.582.2			
03:30 > 03:45	-1683.3	-350.0	-1174.8	0.0	-13.5	-145.0	215.0	1167.2	0.0	750.0	100.0	0.0	350.0	2.582.2			
03:45 > 04:00	-1682.8	-350.0	-1174.3	0.0	-13.5	-145.0	215.0	1167.2	0.0	750.0	100.0	0.0	350.0	2.582.2			
04:00 > 04:15	-1686.7	-350.0	-1177.9	0.0	-13.8	-145.0	215.0	1181.3	0.0	729.0	121.0	0.0	350.0	2.596.3			
04:15 > 04:30	-1686.0	-350.0	-1177.2	0.0	-13.8	-145.0	215.0	1181.3	0.0	729.0	121.0	0.0	350.0	2.596.3			
04:30 > 04:45	-1685.6	-350.0	-1176.8	0.0	-13.8	-145.0	215.0	1181.3	0.0	729.0	121.0	0.0	350.0	2.596.3			
04:45 > 05:00	-1685.0	-350.0	-1176.2	0.0	-13.8	-145.0	215.0	1181.3	0.0	729.0	121.0	0.0	350.0	2.596.3			

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/energy-available-volumes-and-prices>



Energy – Available volumes and prices (Data Download)

Information concerning available volumes and prices that are available on Data Download :

- Available balancing energy volumes per product
- Available balancing energy prices per product

Information concerning available volumes and prices that are available via B2B service :

- Volume :

<https://publications.elia.be/Publications/Publications/AvailableEnergy.v6.svc/GetAvailableEnergyVolumes?day=2020-09-24>

- Price :

<https://publications.elia.be/Publications/Publications/AvailableEnergy.v6.svc/GetAvailableEnergyPrices?day=2020-09-24>

DATA DOWNLOAD PAGE

All data available from this page are time tagged using CET / CEST time.

Category

- ☐ Load
- ☐ Interconnection
- ☐ Generation
- ☒ Balancing

Border and direction

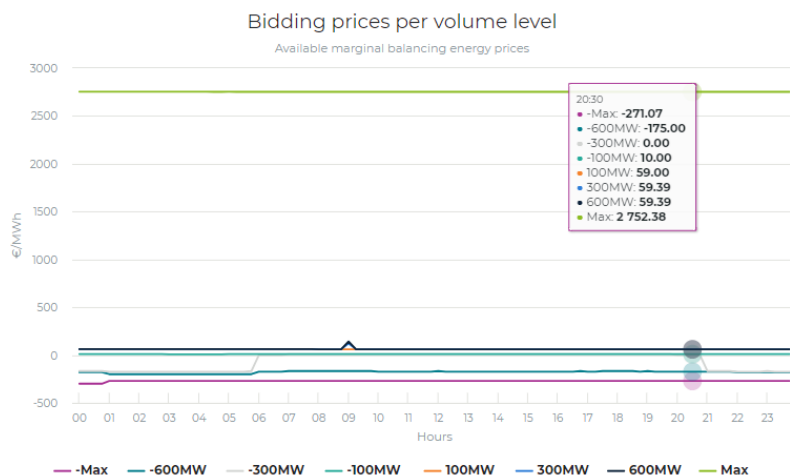
N/A ▼

Data to export

Available balancing energy volumes per product (1/10/2013 ->) ▼



Energy – Bidding Prices by volume level



Information concerning available volumes and bidding prices that are available on Data Download :

- Increment ARC Merit Order
- Decrement ARC Merit Order

	Marginal prices (€/MWh) for activation of																						
Quarter	-Max	-1000 MW	-900 MW	-800 MW	-700 MW	-600 MW	-500 MW	-400 MW	-300 MW	-200 MW	-100 MW	100 MW	200 MW	300 MW	400 MW	500 MW	600 MW	700 MW	800 MW	900 MW	1000 MW	Max	
00:00 > 00:15	-300,00	-250,00	-250,00	-250,00	-200,00	-180,00	-175,00	-175,00	-168,00	0,00	10,00	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	2.753,65	
00:15 > 00:30	-300,00	-250,00	-250,00	-250,00	-200,00	-180,00	-175,00	-175,00	-168,00	0,00	10,00	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	2.753,64	
00:30 > 00:45	-300,00	-250,00	-250,00	-250,00	-200,00	-180,00	-175,00	-175,00	-168,00	0,00	10,00	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	2.753,60	
00:45 > 01:00	-300,00	-250,00	-250,00	-250,00	-200,00	-180,00	-175,00	-175,00	-168,00	0,00	10,00	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	62,20	2.753,71	

Information also available via B2B :

<https://publications.elia.be/Publications/Publications/AvailableEnergy.v7.svc/GetAvailableEnergyVolumeLevelPrices?day=2020-11-19>



Energy - Activated volumes & prices 15' / 1'

The prices given on this page are:

- for **upward regulation**, the highest price Elia paid in the quarter-hour in question;
- for **downward regulation**, the lowest price Elia received in the quarter-hour in question.

16/11/2020

Non validated data for 16/11/2020

Quarter	SI (MW)	NRV (MW)	SR (MW)	GUV (MW)	IGCC+ (MW)	R2+ (MW)	Bids+ (MW)	R3 Std (MW)	R3 Flex (MW)	Inter-TSO Import (MW)	GDV (MW)	IGCC- (MW)	R2- (MW)	Bids- (MW)
09:00 - 09:15	-130,211	134,757	0,000	134,901	116,507	18,394	0,000	0,000	0,000	0,000	0,144	0,000	0,144	0,000
09:15 - 09:30	-121,290	110,413	0,000	110,413	71,678	38,735	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
09:30 - 09:45	-116,178	98,228	0,000	98,228	22,962	75,266	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
09:45 - 10:00	-9,099	7,131	0,000	14,980	11,258	3,722	0,000	0,000	0,000	0,000	7,849	7,564	0,285	0,000
10:00 - 10:15	-52,250	64,430	0,000	65,765	64,659	1,106	0,000	0,000	0,000	0,000	1,335	0,433	0,902	0,000
10:15 - 10:30	-46,339	52,695	0,000	74,747	5,886	68,861	0,000	0,000	0,000	0,000	22,052	22,052	0,000	0,000
10:30 - 10:45	-112,487	86,540	0,000	86,662	9,486	77,176	0,000	0,000	0,000	0,000	0,122	0,122	0,000	0,000
10:45 - 11:00	23,857	-37,232	0,000	22,535	17,933	4,602	0,000	0,000	0,000	0,000	59,767	48,793	10,974	0,000
11:00 - 11:15	258,496	-144,355	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	144,355	60,861	83,494	0,000
11:15 - 11:30	-157,836	54,052	0,000	62,839	62,134	7,705	0,000	0,000	0,000	0,000	8,787	5,832	2,955	0,000
11:30 - 11:45	4,387	18,791	0,000	44,516	40,712	3,804	0,000	0,000	0,000	0,000	25,725	13,031	12,694	0,000
11:45 - 12:00	20,662	-54,420	0,000	40,138	40,138	0,000	0,000	0,000	0,000	0,000	94,558	1,606	92,952	0,000
12:00 - 12:15	338,786	-143,393	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	143,393	10,272	133,121	0,000
12:15 - 12:30	-72,523	38,230	0,000	47,774	46,248	1,526	0,000	0,000	0,000	0,000	9,544	0,000	9,544	0,000
12:30 - 12:45	-66,429	66,532	0,000	67,454	63,463	3,991	0,000	0,000	0,000	0,000	0,922	0,000	0,922	0,000
12:45 - 13:00	177,542	-117,954	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	117,954	0,000	117,954	0,000
13:00 - 13:15	6,497	7,982	0,000	40,971	7,676	33,295	0,000	0,000	0,000	0,000	32,989	0,000	32,989	0,000
13:15 - 13:30	111,111	-31,958	0,000	82,368	6,802	75,566	0,000	0,000	0,000	0,000	114,326	0,000	0,326	114,000
13:30 - 13:45	72,621	-96,956	0,000	32,361	5,396	26,965	0,000	0,000	0,000	0,000	129,317	0,000	15,317	114,000
13:45 - 14:00	217,738	-213,454	0,000	1,989	1,989	0,000	0,000	0,000	0,000	0,000	215,443	0,000	102,243	115,200
14:00 - 14:15	217,775	-129,347	0,000	0,178	0,178	0,000	0,000	0,000	0,000	0,000	129,525	0,000	129,525	0,000
14:15 - 14:30	10,281	-4,945	0,000	38,431	32,636	5,795	0,000	0,000	0,000	0,000	43,376	0,000	43,376	0,000
14:30 - 14:45	131,443	-120,061	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	120,061	0,000	120,061	0,000
14:45 - 15:00	118,469	-76,688	0,000	0,040	0,040	0,000	0,000	0,000	0,000	0,000	76,728	0,000	76,728	0,000
15:00 - 15:15	68,363	-50,712	0,000	0,051	0,027	0,024	0,000	0,000	0,000	0,000	50,763	0,000	50,763	0,000
15:15 - 15:30	49,100	28,786	0,000	38,084	0,000	38,084	0,000	0,000	0,000	0,000	9,238	0,000	9,238	0,000
15:30 - 15:45	39,121	-70,384	0,000	1,119	0,000	1,119	0,000	0,000	0,000	0,000	71,503	0,000	71,503	0,000
15:45 - 16:00	93,277	-44,942	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	44,942	0,000	44,942	0,000
16:00 - 16:15	65,785	-56,379	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	56,379	0,000	56,379	0,000
16:15 - 16:30	81,951	-92,172	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	92,172	0,000	92,172	0,000
16:30 - 16:45	168,971	-80,396	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	80,396	0,000	80,396	0,000
16:45 - 17:00	-55,221	103,382	0,000	200,000	0,000	200,000	0,000	0,000	0,000	0,000	96,618	0,000	96,618	0,000
17:00 - 17:15	-227,477	74,435	0,000	77,624	0,000	77,624	0,000	0,000	0,000	0,000	3,189	0,000	3,189	0,000
17:15 - 17:30	201,176	-118,200	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	118,200	0,000	118,200	0,000
17:30 - 17:45	10,454	18,294	0,000	22,473	0,000	22,473	0,000	0,000	0,000	0,000	4,779	0,000	4,779	0,000
17:45 - 18:00	107,339	-109,566	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	109,566	0,000	109,566	0,000
18:00 - 18:15	61,788	-61,052	0,000	0,846	0,000	0,846	0,000	0,000	0,000	0,000	61,898	0,000	61,898	0,000

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15' vs 1' :

- 15' -> Average for the whole QH
- 1' -> Running average for the QH [Start QH ; Minute X]

SI : System Imbalance = ACE - NRV

NRV : GUV - GDV

SR : Reserve Capacity

GUV : Sum of all upward activations

GDV : Sum of all downward activations

IGCC : Exports/imports to/from neighboring Transmission system operators in case of positive/negative imbalances

R2* : Activation of aFRR energy bids

Bids + : Activation of contracted mFRR energy bids

R3 Std* : Activation of mFRR Standard energy bids

R3 Flex* : Activation of mFRR Flex energy bids

Inter-TSO : Activation of Inter-TSO

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/energy-activated-volumes-and-prices-15-min>



Energy - Activated volumes & prices 15' / 1'

Quarter	SI (MW)	NRV (MW)	Strategic Reserve SR (€/MWh)	Incremental Prices							Decremental Prices			
				MIP (€/MWh)	IGCC+ (€/MWh)	R2+ (€/MWh)	Bids+ (€/MWh)	R3 Std (€/MWh)	R3 Flex (€/MWh)	Inter-TSO Import (€/MWh)	MDP (€/MWh)	IGCC- (€/MWh)	R2- (€/MWh)	Bids- (€/MWh)
08:00 > 08:15	119,632	-31,363	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,70	10,70	10,70	0,00
07:45 > 08:00	-121,115	118,562	0,00	59,37	59,37	59,37	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
07:30 > 07:45	-154,649	65,807	0,00	59,27	59,27	59,27	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
07:15 > 07:30	-13,587	-55,031	0,00	59,39	59,39	59,39	0,00	0,00	0,00	0,00	10,82	10,82	10,82	0,00
07:00 > 07:15	83,730	287,183	0,00	139,02	59,40	59,40	139,02	137,44	0,00	0,00	10,75	10,75	10,75	0,00
06:45 > 07:00	-295,711	144,499	0,00	59,48	59,48	59,48	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
06:30 > 06:45	-175,468	99,198	0,00	59,34	59,34	59,34	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
06:15 > 06:30	-147,634	47,377	0,00	59,55	59,55	59,55	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
06:00 > 06:15	63,970	32,819	0,00	59,45	59,45	59,45	0,00	0,00	0,00	0,00	10,79	10,79	10,79	0,00
05:45 > 06:00	-284,980	123,150	0,00	59,40	59,40	59,40	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
05:30 > 05:45	-203,794	113,088	0,00	59,50	59,50	59,50	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
05:15 > 05:30	21,104	-68,564	0,00	59,78	59,78	59,78	0,00	0,00	0,00	0,00	10,60	10,60	10,60	0,00
05:00 > 05:15	3,549	-1,436	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,90	10,90	10,90	0,00
04:45 > 05:00	-107,027	91,914	0,00	59,34	59,34	59,34	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
04:30 > 04:45	-42,965	56,331	0,00	59,31	59,31	59,31	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
04:15 > 04:30	38,662	-31,939	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
04:00 > 04:15	-20,699	17,281	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
03:45 > 04:00	71,048	-8,544	0,00	59,32	59,32	59,32	0,00	0,00	0,00	0,00	9,13	9,13	9,13	0,00
03:30 > 03:45	54,870	-76,356	0,00	59,99	59,99	59,99	0,00	0,00	0,00	0,00	9,85	9,85	9,85	0,00
03:15 > 03:30	1,404	8,954	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
03:00 > 03:15	42,639	-11,993	0,00	59,56	59,56	59,56	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
02:45 > 03:00	113,965	-110,166	0,00	60,00	60,00	60,00	0,00	0,00	0,00	0,00	9,61	9,61	9,61	0,00
02:30 > 02:45	72,277	-0,452	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,23	10,23	10,23	0,00
02:15 > 02:30	56,157	-53,922	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,89	10,89	10,89	0,00
02:00 > 02:15	156,278	-90,609	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,16	10,16	10,16	0,00
01:45 > 02:00	67,009	10,688	0,00	120,00	59,00	59,00	120,00	114,00	0,00	0,00	10,74	10,74	10,74	0,00
01:30 > 01:45	-108,492	99,868	0,00	59,39	59,39	59,39	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
01:15 > 01:30	-2,298	-1,095	0,00	59,20	59,20	59,20	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
01:00 > 01:15	-225,425	-8,323	0,00	59,60	59,60	59,60	0,00	0,00	0,00	0,00	10,47	10,47	10,47	0,00
00:45 > 01:00	54,188	-5,819	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	10,83	10,83	10,83	0,00
00:30 > 00:45	7,726	20,335	0,00	59,00	59,00	59,00	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
00:15 > 00:30	-155,371	136,908	0,00	59,46	59,46	59,46	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00
00:00 > 00:15	-214,781	108,725	0,00	59,48	59,48	59,48	0,00	0,00	0,00	0,00	11,00	11,00	11,00	0,00

Elia Open Data License

15' vs 1' :

- 15' -> Average for the whole QH
- 1' -> Running average for the QH [Start QH ; Minute X]

MIP : Highest price of all upward activations

MDP : Lowest price of all downward activations

IGCC : set by aFRR price

R2* : Weighted average price of the aFRR activated energy bids

Bids + : Highest price of non-contracted mFRR energy bids

R3 Std* : Highest price of mFRR Standard energy bids

R3 Flex* : Highest price of mFRR Flex energy bids

Inter-TSO : Activation of Inter-TSO

Path on Elia website : <https://www.elia.be/en/grid-data/balancing/energy-activated-volumes-and-prices-15-min>



Energy - Activated volumes & prices 15'/ 1' (Data download)

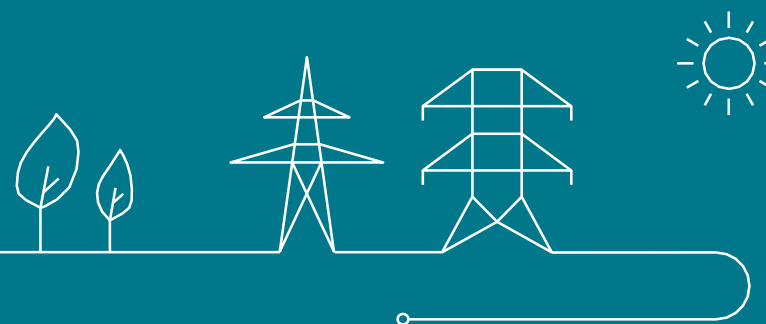
Information concerning activated volumes & prices that are available on Data Download :

- Activated energy volumes
- Activated energy prices
- Activated energy volumes per minute
- Activated energy prices per minute

- Information concerning activated volumes & prices that are available via B2B :
- <https://publications.elia.be/Publications/Publications/ImbalanceNrvPrice.v5.svc/GetImbalanceActivatedEnergy?date=2020-11-19>

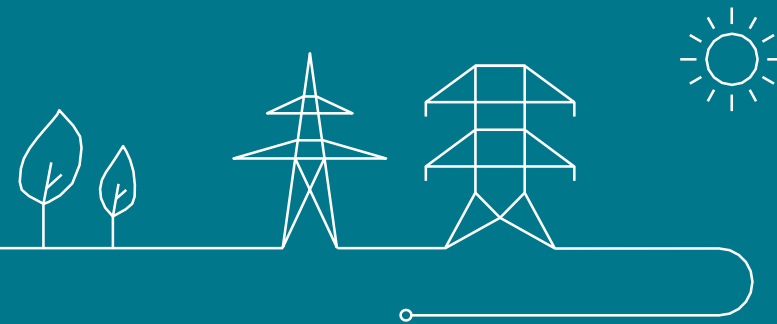


AOB



EU Balancing: design workshops - update

Presented by Cécile Pellegrin



Local implementation MARI (BSP-ELIA)

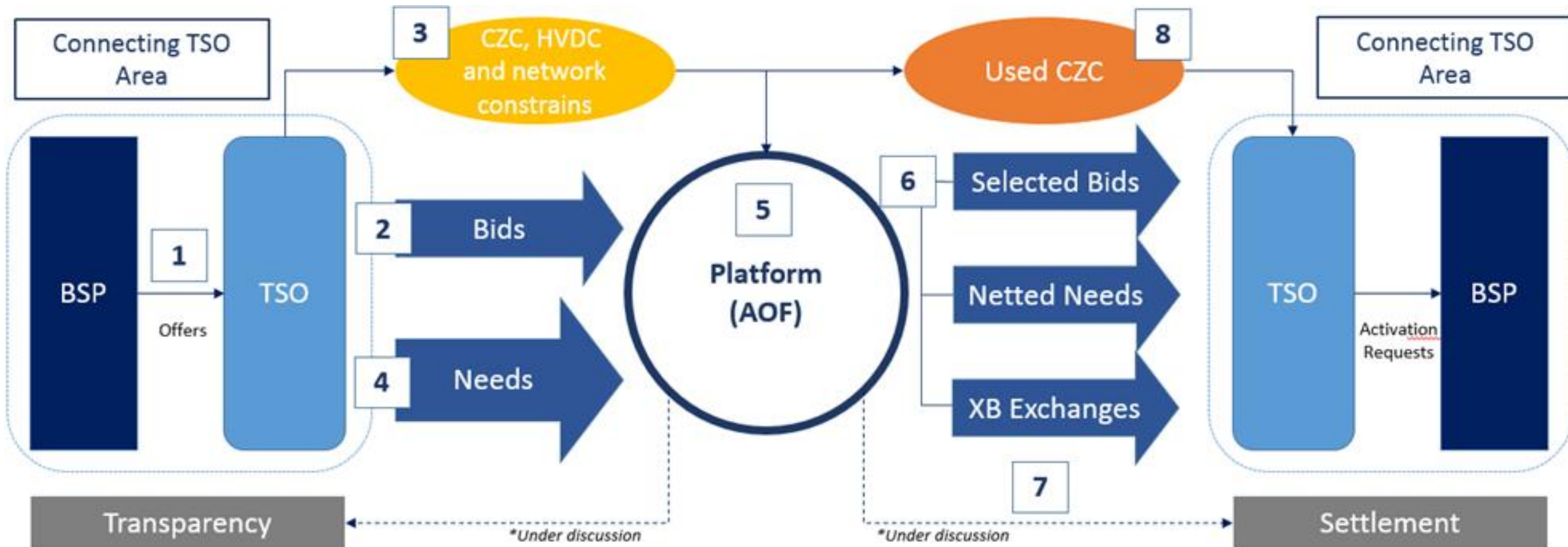
- Local design results from EU design (see also the organized EU workshop(s))
- Local design will be discussed with market parties during different workshops
- Workshops will be organized in parallel with the informal consultation of the design note
- A Q&A session will be foreseen after the reception of the design note
- Complete process will be organized between end November and early February



- *1st workshop (introduction to high-level changes for mFRR): Monday 7/12/2020 (AM)*
- *2nd workshop (detailed mFRR design): Wednesday 16/12/2020 (PM)*
- *3rd workshop (detailed mFRR design): Friday 15/01/2021 (AM)*
- *4th workshop (Q&A session): Thursday 28/01/2021 (PM)*
- *In parallel: informal consultation of the design note from mid December to early February*

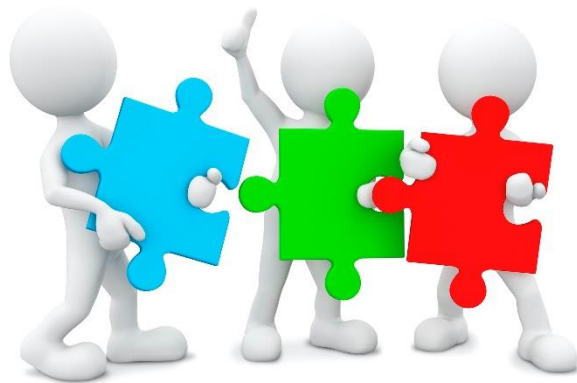


High-level design of the EU platforms: TSO-TSO model



Local implementation PICASSO (BSP-ELIA)

PICASSO



Go live

- Connection to EU aFRR balancing energy platform : Q1- 2022



EU aFRR balancing energy platform impacts

- Marginal price on energy
- Local Merit order list management and interactions with AOF
- Settlement TSO-TSO and TSO-BSP
- ...

EU Balancing Transversal impacts

- Bids filtering for congestion
- Imbalance related topics
- Transparency
- Invoicing
- ..



Local implementation PICASSO (BSP-ELIA)

- Local design results from EU design (see also the organized EU workshop(s))
- Local design will be discussed with market parties during workshops
- Workshops will be organized in parallel with the informal consultation of the design note
- Complete process will be organized early 2021 (February)



LFC Means Consultation

Presented by Nicolas Pierreux

