Balancing Platforms Stakeholder Workshop

08.12.2022

Webinar

PICASSO/IGCC Q&A Document

Questions and Answers
PICASSO/IGCC Project
How do you explain the fact that the CBMPs for negative aFRR are so often negative? For historical generation, the bid prices should be positive.
Negative bid prices for negative aFRR means that the TSOs are paying for the delivery of negative aFRR and therefore the payment direction process goes in the same direction as the energy flow. For delivering negative aFRRs, BSPs require flexibility and are facing opportunity costs. For this reason, negative bid prices for negative aFRR have also been observed in the local aFRR markets before the connection to PICASSO.
How do you explain the significant additional satisfaction of demand? Have the TSOs reduce their procurement in anticipation of PICASSO
According to the System Operations guideline, the procured FRR only has to cover the imbalances in 99% of the time. It is possible that in some situations, the demand exceeds the local procurement. Additionally, dynamic effects must be considered. If large parts of the dimensioned volumes are covered with mFRR, the aFRR demands can temporarily exceed the procured capacity until the mFRR has been physically activated.
Each participating TSO has full access to the common merit order list in order not to unnecessarily restrict aFRR exchanges. If the TSO is not able to cover its aFRR demand with its locally available aFRR, the PICASSO platform is used to cover this demand.
May I ask how the optimization problem is being solved? Heuristic approach, MILP what solver is being used? Calculation time?
The optimization cycle in MTU of the aFRR platform is 4 seconds. The AOF requires typically one second to solve the optimization problem. In order to ensure a robust operation and make the optimization time as short as possible, PICASSO and IGCC use linear, continuous optimization problems.
If all IGCC members were also PICASSO members, would there be a need for IGCC optimization step, or could everything be done by PICASSO AOF, including IN? Is it even planned to replace IGCC completely by PICASSO in future?
Once all IGCC TSOs have joined PICASSO, there is no need for an explicit netting in the IGCC anymore because then all the netting potential is completely used within PICASSO. At the moment this is not foreseen for the next two years as it is not clear for “third-country” TSOs when and if they will join PICASSO.

How does the implicit netting of PICASSO works? compared to imbalancing netting.

The implicit netting in PICASSO is a side effect of the maximization of the social welfare. Therefore, social welfare is usually maximized by not activating positive and negative aFRR at the same time. Consequently, the maximization of social welfare implicitly means that all the counter acting imbalances are netted. The PICASSO optimizer, according to the aFRR implementation framework, also ensures that the netting is maximized, even if activation of balancing energy in opposite directions would be economically beneficial.

Is the current price cap of 15kEur correctly calibrated (based on your analysis)? Does it maximize the social welfare? What if it would be lower/ higher?

The price cap is set in the amendment to the methodology for pricing balancing energy (ACER decision 03/2022). If the price cap leads to a maximization of social welfare, cannot be easily analyzed since the bidding behavior of BSPs under the assumption of different price caps is unknown.

Have I understood correctly that I, as a supplier of balancing energy, do not have to deal directly with PICASSO? The bids of the control energy providers are submitted on the local marketplaces of the countries and PICASSO is a higher authority that then decides on the allocation?

The cross-border interchange of Balancing Energy follows the TSO-TSO model. In this model, every market participant submits its bids to the respective TSO. The TSOs are responsible to forward the bids to the balancing platforms, where the activation and cross-border exchange is optimized to minimize activation costs. The TSOs are responsible for the activation of the bids by sending the respective signals to the market participants. Further details on the process flow can be found in the material of the 2021 MARI/PICASSO Stakeholder workshop.

How can new member TSO can join to the platforms? Is there any typical roadmap? And is it relevant to join to IGCC now or better only to PICASSO?

The accession process includes multiple contractual and technical steps, based on the EBGL and the implementation frameworks. After the contractual accession and the implementation of all necessary interfaces, operability tests are performed to ensure that the TSO is technically ready for connection. Once this technical readiness is confirmed, the Steering Committee of the projects can approve the start of the participation.

For the time being, there is only one accession foreseen in IGCC for the next year. There are no other planned accessions for the upcoming years in IGCC.

It is possible to connect directly to PICASSO without connecting to IGCC but connection to IGCC is easier and therefore it is a good first step before joining PICASSO.

Once the IGCC is not needed any more, would the PICASSO AOF be able to run faster, as perhaps only 1 step is needed, instead of 3?

No significant decrease of the computation time is expected, as the PICASSO optimizer is the most complex part of the optimization while the IGCC optimizer is simple. There is no strong need to decrease the optimization cycle (which is currently 4 seconds).

How does the selection of bids within PICASSO work? Is there only one ladder of activation offers and then it works on a first come first serve basis?

TSOs send their demands continuously and bids are forwarded with a 15 minute validity period. Each 4 seconds, the AOF optimizes the bid selection and aFRR interchange, considering all current demands, bids and ATCs. The CBMPs as well as the selected bids are determined for all TSOs at the same time.

Regarding the data access. Does ENTSOE plan to publish data about how regulation energy was exchanged from TSO to TSO in PICCASSO platform in individual trading intervals?

(Question to be addressed later on the TP section)

What is status and outlook for Switzerland accession?

The technical readiness of Switzerland has been acknowledged within the project. However, the participation of Switzerland in the PICASSO platform is regulated based on articles 1.6 and 1.7 of EBGL and currently is the subject of litigation by Swissgrid at the General Court of the European Union.

What are the general technical requirements for TSOs to join PICASSO?

There are two communication streams (non-real time and real-time communication) between local TSOs and PICASSO. Each TSO has to implement the interfaces for these two communication streams and has to ensure that the load-frequency controller is adapted in a way that the cross-border energy exchange calculated by PICASSO can be considered in the local calculations of the input to the load-frequency controller. More information can be found in the material of the MARI/PICASSO Stakeholder Workshop of 2022.

Is the activation of bids in other countries considered in the imbalance price? For example, if a German demand is covered with a Czech bid, is the price of this Czech bid considered in the German imbalance price?

The imbalance settlement is locally implemented by each country following the European Regulation (Imbalance Settlement Harmonization Methodology). According to this regulation, the Imbalance Price is based on the CBMP(s) calculated by the balancing platforms. The CBMPs also reflect the price of bids which are activated outside of the LFC area. Following this example, in Germany the marginal price would be set by the Czech bid and then the CBMP would also impact the imbalance price within Germany and ensure the financial neutrality of the TSOs.

Where can I find the presentation from last year?

Material from the Workshop of last year is available here.

MARI Q&A Document

Questions and Answers

MARI Project Planning

No questions received.

Exclusive Bids

No questions received.

Operational Experiences

Do those 9 activations represent just 9 distinct 15-minute periods?

mFRR activations are done in quarterly periods, however the activation do not last long and in case of direct activations there could be overarching activations spanning over more than one quarter-hour.

The clearing can result in activations under 1 MW? Why are there decimals in the example?

Due to portfolio-bidding, BSPs might provide decimal point MW to deliver mFRR. However, for the specific example provided in slide 12, this is due to the fact that the flows between different LFC areas have been splitted.

Is it possible to have access to the platform showed in slide 12? It should be most useful to understand the clearing prices?

Only TSOs can get access to MARI platform. Activation optimization function document published on ENTSO-E website (Please see the link) could be reviewed to get detailed information about the algorithm. The project will also consider making some examples available together with descriptions, for market parties.

How does your optimization algorithm prioritize national vs. International mFRR, when the national bids have a higher price? How does the cost of transportation affect the algorithm?

The goal of the MARI optimization algorithm is maximizing the social welfare globally. For instance, a bid from Denmark could be activated in France or Norway in a way to maximize social welfare. In general, platform aims to allow all TSOs in actual operation to have full access to the common merit order list and does not restrict TSOs. Nevertheless, if several solutions with the same social welfare exists, the algorithm will choose that solution that minimizes the cross-border flows; no costs and losses on interconnectors are considered in the AOF runs.

Are the TSOs obligated to follow a certain order in balancing an LFC area? Can a TSO for example set the demand to zero for scheduled activation in MARI and solve the imbalance with a demand to PICASSO instead (and vice versa) for the following ISP?
The triggers for activating mFRR are not harmonized among TSOs. There might be TSOs using one or other balancing services more frequently.

Comment: Increasing the Number of gateways for TERRE (and the 15 min in MARI) should imply portfolio-based bidding for the products but there are some MS still with the unit-based bidding concept.
No specific reply was given as it was just a comment.

Accession Roadmap

Do you have any more information about the status of Serbia and North Macedonia? Is there any indication about their observer status resulting in membership?
There is not a detailed information available yet. However, Energy Community process to adopt market rules including balancing regulation is ongoing for these countries and it is in pipeline of these countries to join to the platform.

Is accession after 2024 also still possible?
Technically this is possible and there is no closure date of the platform for accessions. However, for TSOs there is a deadline when derogation expires.

TERRE Q&A Document

Questions and Answers
Question: Are the TSOs obligated to follow a certain order in balancing an LFC area? Can a TSO for example set the demand to zero for scheduled activation in MARI and solve the imbalance with a demand to PICASSO instead (and vice versa) for the following ISP? **Answer:** The triggers for activating mFRR are not harmonized among TSOs. There might be TSOs using one or other balancing services more frequently. **Question:** Can a harmonization of mandatory published data be considered between the platforms? There is an asymmetry between MARI/PICASSO and TERRE in the other hand. IF aFRR & IF mFRR require more data to be published than EBGL (for example exchange volume). This should be upgraded in IF RR for lining up. This harmonization could be consulted in the public consultation launch in Q1/2023, regarding the increase of the clearings. **Answer:** This topic has already been introduced by ACER and TERRE TSOs have been interacted with TERRE NRAs on the topic. Stakeholders will be informed of the developments on this topic at some point in time. **Comment**: Increasing the Number of gateways for TERRE (and the 15 min in MARI) should imply portfolio bidding for the products but there are some MS still with the bidding units concept. Just a comment on this. *No specific reply was given as it was just a comment.*

Transparency and Reporting Q&A Document (Common MARI/PICASSO Session)

Questions and Answers
Can a harmonization of mandatory published data be considered between the platforms? There is an asymmetry between MARI/PICASSO and TERRE in the other hand. IF aFRR and IF mFRR require more data to be published than EBGL (for example exchange volume). This should be upgraded in IF RR for lining up. This harmonization could be consulted in the public consultation launch in Q1/2023, regarding the increase of the clearings. This topic has already been introduced by ACER and TERRE TSOs have been interacted with the TERRE NRAs on that topic. Stakeholders will be informed of the developments on this topic at some point in time. Will there be a grace period in which the CBMP and exchanged volumes will be published at TransnetBW and TP in parallel? or will both modes of publication persist? The target solution for publications is ENTSO-E TP. However, at present there is no plan to suspend the publication at TransnetBW since it would be safer to publish the volumes on both websites in the beginning. The data will continue to be published on both platforms for a certain timeframe. As for the cross-border capacity limit for PICASSO, will it be possible to publish complete capacity information since only adjustments are published for now. Before the implementation of a methodology for balancing timeframe capacity calculation, all remaining Transmission Capacity after the Intraday coupling is made available to the balancing platforms. This information can be found on the ENTSO-E TP in the “Transmission” section. If these leftover capacities are adjusted to ensure operational security, this is explicitly published on ENTSO-E TP. At present, there is a legal requirement in the Implementation Framework to publish only the adjustments of cross-zonal capacities thus, it is not foreseen to publish the complete capacity information. Public Algorithm Description file of PICASSO does not list out constraints of optimization. Is this available in the document to have a better view on the complex problem? All main constraints are described in the document. Whether there is a need to extend the document will be checked internally.