



TECHNICAL DECISION

Technical limits for
bidding prices and clearing prices
in the Balancing Market

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1 Introduction

In accordance with Commission Regulation (EU) 2019/943 on the internal market for electricity and, in particular, article 10, there shall be neither a maximum nor a minimum limit to the wholesale electricity price. This provision shall apply, inter alia, to bidding and clearing prices in all timeframes. It shall include Balancing Energy and imbalance prices, without prejudice to the technical price limits which may be applied in the balancing timeframe and in the Day-Ahead and Intraday timeframes.

According to the same article, NEMOs may apply harmonised limits on maximum and minimum clearing prices for day-ahead and intraday timeframes. The harmonised prices for the Day-Ahead Market and the Intraday Market pursuant to articles 41(1) and 54(1) of Commission Regulation 2015/1222 (hereafter referred to as “CACM”), must take into account the maximum value of lost load (“VoLL”) so as not to restrict free formation of prices.

By virtue of its Decisions No. 04/2017¹ and 05/2017², pursuant to articles 41 and 54 of CACM, and taking into account the main goals of Commission Regulation (EU) 2019/943 set out in article 3 thereof, and in particular the need to encourage free price formation and avoid actions that would impede price formation, ACER established harmonised maximum and minimum clearing prices for the Day-Ahead Market and the Intraday Market. The above decisions set the maximum and minimum prices to be applied in all Bidding Zones as follows:

- i. harmonised maximum clearing price for Day-Ahead Market Orders +3.000€/MWh and corresponding minimum price -500€/MWh, and
- ii. harmonised minimum clearing price for complementary and continuous trading on the Intraday Market +9.999€/MWh and corresponding minimum price -9.999€/MWh.

Commission Regulation (EU) 2017/2195 (hereafter referred to as “EBGL”) establishes a guideline on electricity balancing. More specifically, article 30 of EBGL specifies that the pricing of Balancing Energy should, inter alia:

- i. be based on marginal pricing,
- ii. define how the activation of Balancing Energy bids activated for purposes other than balancing affects the Balancing Energy price,
- iii. establish at least one price of Balancing Energy, for each imbalance settlement period,
- iv. give correct price signals and incentives to market participants, and
- v. take into account the pricing method in the Day-Ahead and Intraday timeframes.

By virtue of decision No. 01/2020³ and paragraph 70 thereof, pursuant to article 30(1) of EBGL, ACER examined the legality of introducing technical limits in the Balancing Market under Commission Regulation (EU) 2019/943 and concluded that it is allowed. By this

¹https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2004-2017%20on%20NEMOs%20HMMCP%20for%20single%20day-ahead%20coupling.pdf

²https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2005-2017%20on%20NEMOs%20HMMCP%20for%20single%20intraday%20coupling.pdf

³https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2001-2020%20on%20the%20Methodology%20for%20pricing%20balancing%20energy.pdf

decision, a methodology⁴ for the determination of Balancing energy prices was issued (“Methodology for pricing balancing energy and cross-zonal capacity used for the exchange of balancing energy or operating the imbalance netting process”). According to article 3 of the methodology, the technical limits for bidding and clearing prices for all Balancing Energy products, both for downward and for upward Balancing Energy, shall be equal to:

- i. maximum limit +99.999 €/MWh, and
- ii. minimum limit -99.999 €/MWh.

The implementation of the above methodology and the technical limits specified therein shall commence upon the launch of and the participation of TSOs in the European platforms for the exchange of Balancing Energy from frequency restoration reserves with manual (MARI) and automatic activation (PICASSO). However, the determination of technical limits is needed for the operation of the market algorithms that arise out of the tests performed by the IPTO on the new platforms, but also following paragraph 69 of the above methodology.

Moreover, as specified in paragraph 71 of ACER’s decision No. 01/2020, when proposing the value of these limits for the Balancing Market, the maximum and minimum prices for the Day-Ahead Market and the Intraday Market must be taken into account. More specifically the price limits for Balancing Energy should not be lower than the limits imposed within the Day-Ahead Market and the Intraday Market. In this way, the provision of adequate incentives for participation in markets which pre-date the Balancing Market is ensured. Consequently, the technical limits for Balancing Energy bidding and clearing prices should be consistent with those of the Day-Ahead Market and the Intra-Day Market and, by extension, consistent with the VoLL estimate, so that it is possible to increase prices to levels the final consumers will be ready to accept in order to avoid an outage. In other words, it should be possible for the real value of energy to reach the maximum level that the final consumers will be willing to pay for the electricity they consume.

The VoLL price shall not necessarily be the same for all types of consumers. This differentiation shall allow the activation of optional management of demand response before the maximum VoLL price that consumers are willing to accept is reached. A relevant study⁵ carried out by ACER in order to estimate VoLL in Greece showed variable prices per consumer type (domestic or non-domestic). For non-domestic consumers, depending on their type of activity, prices ranged between 410 €/MWh and 2.380 €/MWh, whereas for domestic consumers, the study found a mean annual VoLL equal to 4.240 €/MWh.

⁴https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C2/ACER%20Decision%20on%20the%20Methodology%20for%20pricing%20balancing%20energy%20-%20Annex%20I.pdf

⁵https://www.acer.europa.eu/en/Electricity/Infrastructure_and_network%20development/Infrastructure/Documents/CEPA%20study%20on%20the%20Value%20of%20Lost%20Load%20in%20the%20electricity%20supply.pdf

2 Technical Limits for bidding prices and clearing prices for Balancing Energy

To sum up, considering that:

- i. Technical price limits are necessary for the operation of the Balancing Market.
- ii. The technical price limits for Balancing Energy should not be less restrictive than the price limits for the Day-Ahead Market and the Intraday Market.
- iii. Technical price limits should take into account the value of lost load (“VoLL”).
- iv. The technical price limits for Balancing Energy should allow a free, efficient and fair price formation for all technologies that can participate in the Balancing Market, including RES, demand response and storage.
- v. Where no Market coupling is applied, a Local Intraday Market (LIDA) shall operate, in which maximum and minimum clearing limits shall coincide with those of the Day-Ahead Market, i.e. from -500€/MWh to 3.000€/MWh,
- vi. Where Market coupling is applied, Complementary Regional Intraday Auctions (CRIDA) and/or Continuous Intra-Day Trading (XBID) shall operate, whose maximum and minimum limits shall be harmonised with ACER’s Decisions No. 04/2017 and 05/2017, i.e. +9.999€/MWh to -9.999€/MWh respectively,
- vii. With the participation in the European platforms for the exchange of Balancing Energy from frequency restoration reserves with manual (MARI) and automatic activation (PICASSO), maximum and minimum limits shall be harmonised with ACER’s Decision No. 01/2020, i.e. +9.999€/MWh to -9.999€/MWh respectively.

As a result of the above, it is proposed that:

- i. In the first period of operation of the Markets, from their launch till the coupling with the Italian market, the maximum and minimum technical limits set for bidding prices and clearing prices for Balancing Energy should be equal to +4.240€/MWh and -4.240€/MWh.
- ii. In the period between the implementation of Complementary Regional Intraday Auctions (CRIDA) and/or Continuous Intra-Day Trading (XBID), and until inclusion of the IPTO in one of the European platforms MARI or PICASSO, the maximum and minimum technical limits set for bidding prices and clearing prices for Balancing Energy should be equal to the Intraday Market limits, i.e. +9.999€/MWh and -9.999€/MWh.
- iii. Finally, after inclusion of the IPTO in one of the European platforms MARI or PICASSO, the maximum and minimum technical limits set for bidding prices and clearing prices for Balancing Energy should be equal to the limits established by ACER’s Decision No. 1/2020, i.e. +99.999€/MWh and -99.999€/MWh.

The above proposal ensures a smooth and gradual transition from the existing energy price limits, where the maximum bidding limit has been set at 300€/MWh and the minimum limit is equal to the minimum variable cost. The proposed technical limits will achieve a fair and smooth price formation in the process of transition to the new market model and will support the necessary familiarisation of participants in order to avoid disturbances in the wholesale market during the transition. At the same time, they ensure that Balancing Services shall be provided in a fair and objective manner, without discriminations in favour or against market participants, including demand response and energy storage.

3 Technical Limits for bidding prices and clearing prices for Balancing Capacity

According to the common proposal⁶ developed by all TSOs regarding the list of standard products for balancing capacity for frequency restoration reserves and replacement reserves, issued by ENTSOe, pursuant to article 25(2) of EBGL, bidding prices for Balancing Capacity may be negative or zero. Consequently, the minimum limit for Bidding prices for Balancing Capacity shall be equal to zero.

As part of this Technical Decision and in order to investigate the implementation of a maximum limit for Balancing Capacity Bidding prices, the IPTO conducted a study on the influence that a maximum limit for Balancing Capacity Bidding prices would have upon the execution of the integrated scheduling process.

According to the findings, it is observed that in all the cases examined, the Balancing Capacity bidding price does not cause any significant changes to the ISP execution results, other than the expected increase in the Balancing Capacity compensation cost. The increase in the Balancing Capacity compensation cost has a minimal influence on the overall cost of securing Balancing Energy and the dispatch of Balancing Service Entities.

Given the minimal influence of the bidding price limit for Balancing Capacity on the remaining ISP results, the IPTO proposes that the relevant limit should be equal to the opportunity cost for the commitment of Balancing Capacity. If Balancing Capacity has been allocated to a Balancing Market Participant by the ISP, the submission of Balancing Capacity Offers may limit its participation in the Intraday Market by the quantity committed through the ISP results. Consequently, the opportunity cost to which a Participant that has been allocated Balancing Capacity is exposed shall be the inability to participate in the Intraday Market for the specific quantity.

The above restriction on participating in the Intraday Market due to commitment of Balancing Capacity as a result of the ISP shall apply to the period following the launch of Continuous Intra-Day Trading (XBID), whereas it shall not apply in the preceding period. Consequently, for the period following the launch of the Continuous Intra-Day Trading (XBID), it is proposed that the maximum limit for Balancing Capacity bidding prices and clearing prices in the ISP should be equal to the corresponding maximum allowed limit in the Intraday Market, i.e. +9.999€/MW-hour. For the period until the launch of the Continuous Intra-Day Trading (XBID), the Participants shall not be subject to any opportunity cost due to commitment of Balancing Capacity through the ISP. For the above reason and in order to ensure a smooth and gradual transition towards the limit of +9.999€/MW-hour, it is proposed that the value of the maximum limit for Balancing Capacity bidding prices and clearing prices in the ISP should be in the range between the existing limit and the limit that shall apply after the launch of Continuous Intra-Day Trading (XBID).

As a result of the above, it is proposed that:

- i. In the initial period of operation of the new Markets, from their launch until the implementation of Continuous Intra-Day Trading (XBID), the maximum limit set for Balancing Capacity bidding prices and clearing prices in the ISP should be

⁶ https://consultations.entsoe.eu/markets/ebgl_art25_spbcc/

equal to the maximum allowed Energy Bidding price for the Intraday Market, i.e. +3.000€/MW-hour.

- ii. From the launch of the Continuous Intra-Day Trading (XBID) onwards, the maximum limit set for Balancing Capacity bidding prices and clearing prices in the ISP should be equal to the maximum allowed limit for Energy Bidding in the Intraday Market, i.e. +9.999€/MW-hour.

4 Technical limits in the Balancing Market

By this Technical Decision, the technical limits for bidding prices and clearing prices are determined as follows:

A. Technical Limits for bidding prices and clearing prices for Balancing Energy

Timeframe	Balancing Energy €/MWh	
	minimum	maximum
1 st Period	-4.240	+4.240
2 nd Period	-9.999	+9.999
3 rd Period	-99.999	+99.999

1st Period: From the launch of the new Markets until the implementation of Complementary Regional Intraday Auctions (CRIDAs) and/or Continuous Intra-Day Trading (XBID).

2nd Period: From the implementation of Complementary Regional Intraday Auctions (CRIDAs) and/or Continuous Intra-Day Trading (XBID) until inclusion of the IPTO in one of the European platforms, MARI or PICASSO.

3rd Period: From inclusion of the IPTO in one of the European platforms, MARI or PICASSO onwards.

B. Technical Limits for bidding prices and clearing prices for Balancing Capacity

Timeframe	Balancing Capacity €/MW - hour	
	minimum	maximum
1 st Period	0	+3,000
2 nd Period	0	+9,999

1st Period: From the launch of the new Markets until the implementation of Continuous Intra-Day Trading (XBID).

2nd Period: From the implementation of Continuous Intra-Day Trading (XBID) onwards.

5 Market Monitoring

To achieve a healthy and competitive market, price formation must take place in such a way as to reflect, as far as possible, the real value of electricity, the resources available each time and the production and demand conditions, thus ensuring market transparency and liquidity. Similarly, the implementation of price limits for Balancing Energy and Capacity, as well as their adjustment, should be accompanied by Market monitoring measures to prevent any manipulation, significant influence or abuse of position by any participant, and to detect harmonised practices and strategic offers.