
Annex 6: Justification of configurations of the Bidding zone review region “Iberian Peninsula” which are to be considered in the bidding zone review process

Bidding Zone Review Region "Iberian Peninsula"

1 October 2019

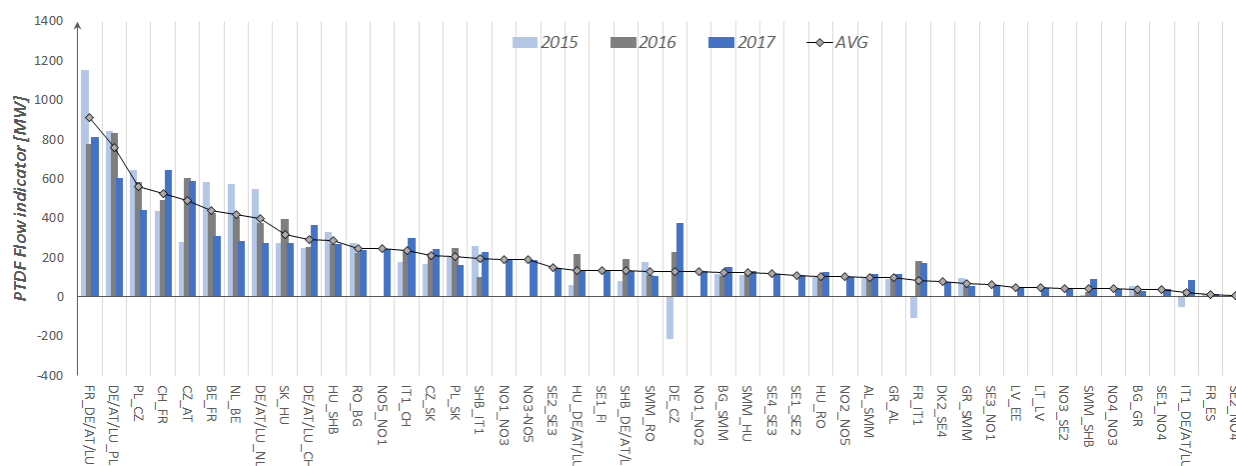
1.1 Argumentation why Iberian Peninsula proposes to provide only status quo configuration

The absence of structural internal congestions within Iberian Peninsula both affecting cross-border trading and purely internal congestions without cross-border affection lead Iberian TSOs to propose maintaining current BZ configuration within Iberian Peninsula.

Following indicators will demonstrate that current BZ configuration needs no review either from Article 14 of Regulation (EU) 2019/943 perspective or from Article 32 of Commission Regulation (EU) 2015/1222 as neither internal structural congestions affecting cross-border trade nor purely internal structural congestions affecting market efficiency exist.

- Impact on neighbouring bidding zones

As it was reported by the Bidding zones Technical Report 2018, the Iberian Peninsula shows a radially structured part of the EU system and its PTDF Flow deviation indicator is negligible for other bidding zones border.



Source: https://docstore.entsoe.eu/Documents/nc-tasks/EBGL/CACM_A34.4_20181015_BZ_TR_FINAL.pdf

The following map shows the average PTDF Flow Indicator for 2018 (in MW). The PTDF indicator estimates the size of loop flows and also includes uncertainties related to the PTDF matrixes adopted for the computation as it is described in the BZ TR 2018. As it can be seen in the map, PTDF values for PT-ES and FR-ES interconnection are negligible (2MW and 3MW respectively) compared to the PTDF values for other BZ borders as represented in the figure above. This shows the inexistent interdependency between Iberian Peninsula and central Europe due to both the weak level of interconnection in FR-ES BZ border and the radial nature of the electric interconnection between Iberian Peninsula and the rest of Europe.



PTDF Flow Indicator from 2018 for SWE (in MW)

Hence being the Iberian Peninsula relatively isolated from the rest of Europe it has no impact on neighbouring bidding zones which justifies that the study of the Iberian Peninsula BZs configuration is carried out separately from the rest BZs in Europe.

- **Cross-zonal trading** (BZ Review criteria according with Article 14 of Regulation (EU) 2019/943)

Cross-border affection of internal congestions can be measured firstly by combination of two assessments:

1. Level of available transmission capacity with regards to cross-zonal trade possibilities.

Firstly it should be assessed for which interconnections cross-zonal capacity is scarce and hence represents a limitation to cross zonal trade. This must be assessed analyzing both, level of utilization of the interconnection (relation between commercial schedule and available transmission capacity) and level of price convergence of BZs at both sides of interconnection (% hours with same price shows whether cross-zonal capacity limits or not cross-zonal trade). Following tables show both ratios for Iberian Peninsula interconnections (*2019 data until 31st July 2019*):

% Utilization	2017	2018	2019
PT-ES	39,91	39,75	39,75
FR-ES	84,83	86,88	90,93

Source: www.iesoe.eu

Price convergence [% hours]	2017	2018	2019
PT-ES	93,30	94,78	92,96
FR-ES	24,86	24,49	16,71

Source: www.iesoe.eu

As it can be concluded from the tables above, while PT-ES BZ border does not represent any limitation at all for cross-zonal trade (high value of price convergence combined with low ratio of utilization) FR-ES BZ border does limit cross-zonal trade (low value of price convergence combined with high ratio of utilization).

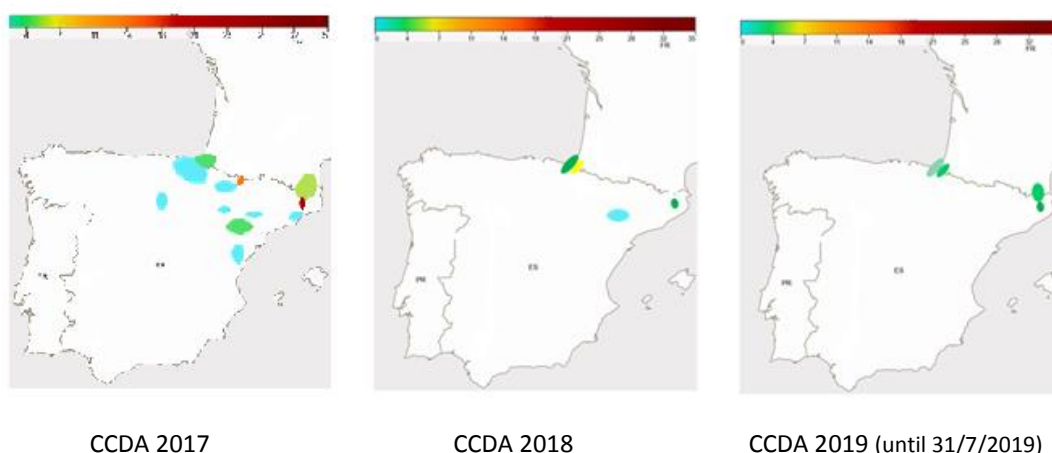
Hence the assessment of impact of internal structural congestions on cross-zonal trade is focused on FR-ES interconnection only as in practice there exist no limitations for cross-zonal trade between Portugal and Spain.

2. Impact of internal structural congestions in level cross-zonal trade.

Once the interconnections that limit cross-zonal trade have been identified (ie.: FR-ES interconnection for Iberian Peninsula’s case) it has to be assessed to which extent this limitation was due to internal structural congestions or to congestions located directly at the BZ border elements.

The structural congestions relevant to be assessed for evaluating their impact on cross-zonal trades are those that are identified in the capacity calculation process (CCDA) as these are the ones that could limit the capacity to be offered to the market. Congestions detected afterwards will not limit cross-zonal trades as these are considered firm after allocation occurs but can only imply higher firmness costs impacting the market efficiency and will be assessed in the next bullet point through ACER’s indicator “RA performance”.

The following maps show the network congestions at transmission level in Spanish Bidding Zone identified during capacity calculation process that limited FR-ES cross-zonal trade (FR-ES CCDA) from 2017 to 2019 (data until 31st July 2019).



As anticipated in ENTSO-E’s BZ Technical Report 2018, the FR-ES CCDA in the Spanish bidding zones have experienced a decrease from 2017 to 2019 due to several action plans in the Spanish transmission network. In 2018 and 2019, the FR-ES CCDA in the Spanish bidding zone are mostly placed on the interconnection lines between France and Spain and sometimes close to them. The frequency of internal REE active market constraints having some impact on the Spain-France border has stayed below 5% of the time since 2018 for all internal congestions. Therefore, these congestions cannot be qualified as structural congestions as they are caused by variable reasons as network element outages or unusual operational situations related to RES or demand.

Hence, in the Iberian Peninsula there exist no internal structural congestions affecting cross-zonal capacity in FR-ES interconnection. Indeed, FR-ES CCDA in the Iberian Peninsula are placed on the interconnection lines between France and Spain. This fact is reflected in an increase of NTC in the FR-ES border expected only by the commissioning of the new interconnection in 2025.

- **Market efficiency** (BZ Review criteria according with Article 33 of Commission Regulation (EU) 2015/1222)

Impact of purely internal congestions can be measured by the market efficiency in each Bidding Zone.

According to ACER’s Market Monitoring Report 2017, market efficiency of BZ configuration can be monitored by calculating the ratio between the cost of remedial actions per unit of demand being those BZs presenting a ratio greater than 1.0 €/MWh considered as inefficient.

Before following this approach it should first be noted that there exist several different reasons for carrying out remedial actions other than those that could be solved by new BZ configuration (physical congestions on network elements could be solved directly by the

market if it is possible to gather all congested network elements creating a new BZ border). Hence, in order to reliably determining the potential interest of modifying BZ configuration according to remedial actions costs first it needs to be determined the share of total remedial actions costs that corresponds to physical congestions in elements of the transmission network.

Given that this classification of Remedial Actions per underlying cause (network congestion at transmission level, voltage issues at transmission level, other issues at transmission level, issues at distribution level) was not implemented until 2018 there exist no official registers of costs resulting from Remedial Actions for solving network congestion for properly calculating RA performance indicator for 2017. The following table estimates the indicator in 2017 assuming the ratio between costs associated to network congestions at transmission level and total Remedial Action costs was the same both in 2018 (for which this classification is already in place in ACER data request for MMR 2018) and for 2017. Data for 2018 and 2019 (until 31st July) have been calculated with real data for costs associated to Remedial Actions for solving network congestions.

		2017	2018	2019
Spain	Total costs of Remedial Actions [k€]	371.475	367.743	137.500
	Costs of Remedial Actions related to network congestion at transmission level [k€]	62.112*	61.656	9.020
	Total national consumption [GWh]	252.506	253.576	146.295
	RA performance [€/MWh]	0,25*	0,24	0,06
Portugal	Total costs of Remedial Actions [k€]	44.525	16.764	**
	Costs of Remedial Actions related to network congestion at transmission level [k€]	0*	0	**
	Total national consumption [GWh]	49.638	50.897	**
	RA performance [€/MWh]	0*	0	**

* Values estimated assuming same share of cost both in 2018 and 2017 of remedial actions between the different underlying causes.

** REN data for 2019 will be not available until October 2019 and will be included in the updated version of the document

As it can be seen, the Remedial Action performance indicator is lower than 1.0 €/MWh meaning that no reconfiguration of BZ is needed in the Iberian Peninsula for market efficiency reasons either.

To conclude, given the positive results of the assessment of current BZ configuration of Iberian Peninsula for all the indicators evaluated above (lack of impact in neighbouring bidding zones, lack of impact of internal structural congestions in cross-zonal capacity and good market efficiency) there exist no justification to review the Status Quo in Iberian Peninsula.