Legal Aspects of the Bidding Zone Review (BZR)

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Bidding zone review 1/2

- **Bidding Zone** is the largest geographical area within which market participants are able to exchange energy without capacity allocation;

- **Why:** Bidding zones are crucial for market-based electricity trading;

- According to the Electricity Regulation, all TSOs have to conduct a common study on alternative BZ configurations – **Bidding Zone Review (BZR)**;

- BZR is a 12-month process with the purpose to increase economic efficiency and cross-zonal trading, while maintaining security of supply in the EU.

Bidding zone review 2/2

- **Legal basis:**

✓ Article 14 of **Electricity Regulation 943**: Bidding zone review shall be carried out to ensure an optimal configuration of bidding zones;

✓ Bidding zone borders shall be based on long-term, structural congestions in the transmission network. BZs shall in principle not contain such structural congestions unless they have no impact on neighbouring BZs, etc.

✓ **Capacity Allocation & Congestion Management Guideline (CACM GL)** provides that bidding zones should be defined in such a manner as to ensure efficient congestion management and overall market efficiency & lays down the requirements for the establishment of common methodologies for a review process for defining bidding zones (Article 9 of CACM GL);

✓ **Bidding zones Methodology (ACER Decision of 24 November 2020)** has as its legal basis Article 14(5) of Electricity Regulation 943.

First Bidding Zone Review

- **Action 1 - TSOs' proposal for the methodology, assumptions and alternative BZ configurations**. On behalf of the TSOs, ENTSO-E submitted a proposal concerning the methodology and assumptions to be applied in the BZR process and for alternative bidding zone configurations to be assessed by the relevant NRAs for approval, pursuant to Article 14.5 of the Electricity Regulation

- **Action 2 - NRAs' decision**: On 17 December 2019, all NRAs informed all TSOs by letter that they considered the initial TSOs' proposal incomplete due to the absence of alternative configurations in some bidding zone review regions and requested all TSOs to complete the proposal with proper alternative bidding zone configurations within two months.

- On 18 February 2020, all TSOs have resubmitted the updated proposal;

- Since the NRAs did not agree to approve the proposal, **the decision on the methodology, assumptions, and alternative bidding zone configurations to be considered in the BZR process was transferred to the EU Agency for the Cooperation of Energy Regulators (ACER)** on 13th July 2020;

- This marks the start of the Second BZR.

Second Bidding Zone Review

- **Action 3 - ACER decision No 29/2020:** On 24th November 2020, ACER issued its decision on the methodology and assumptions that are to be used in the BZR process and the alternative BZ configurations to be considered;

- Additionally, Annex II of the ACER Decision on the BZR Methodology includes a request for TSOs to deliver the results of a European Locational Marginal Pricing (LMP) simulation pursuant to Article 11 of the methodology.

- **Action 4 - LMP simulation:** TSOs of Continental Europe and Ireland as well as Nordic Bidding Zone Review Regions (BZRRs) performed the LMP study between 24th November 2020 and 4th March 2022;

- **Action 5 - ACER's decision on alternative BZ configurations:** The final ACER decision on the alternative BZ configurations was adopted on 8 August 2022;

- **Action 6 - BZR:** After the final ACER decision is published on 8 August 2022, the formal BZR process starts, and takes 12 months. During the 12-month BZR process, alternative BZ configurations are assessed based on a wide variety of indicators including overall economic efficiency and social welfare, market liquidity, transition costs, and the ability to maintain operational security of the grid.

Second Bidding Zone Review: Process Overview

The All TSOs proposal of methodology and configurations submited in October 2019 ended on ACER´desk…

We are here

Methodology and assumptions
- by ACER decision
- Approved: 24 November 2020

LMP
- by All TSOs
- Delivered: March 2022

Alternative Configurations
- by ACER
- Issued: 8 August

Bidding Zone Review
- by the TSOs of the BZRRs
- From 8 August 2022 to 8 August 2023

Relevant MSs unanimous decision to maintain or amend the BZ in 6 months

ACER methodology has 2 steps:
1. Methodology + request to TSOs to deliver LMP
2. Definition of alternative configurations

Example of Legal Challenges: LMP Data Publication

- According to Article 16 of the Bidding Zone Review Methodology, TSOs shall publish all inputs for the BZR no later than four months after the BZR starts, and all outputs of the BZR no later than one month after the BZR ends;

- Moreover, Article 16 states the status of certain information as confidential under a given jurisdiction shall not prevent that information from being published in another jurisdiction;

- Challenge: different confidentiality requirements in various national laws of the TSOs participating in the BZR process;

- The BZR Methodology, and a later ACER decision, put an obligation on TSOs and ENTSO-E to publish data related to the Locational Marginal Pricing (LMP) study: data can be accessed on ENTSO-E website.

ACER Decision on Alternative Bidding Zone Configurations

- The Decision was adopted on 8 August and follows from the lack of configurations submitted by TSOs for continental Europe back in 2020;

- The Decision uses ACER's high-level approach (consulted in July 2021), which relies on TSOs LMP simulation results and additional analysis on e.g. loop flows (see below);

- In line with the Electricity Regulation (Article 14(1)), **the alternative configurations have been selected based on the objectives of maximising economic efficiency and cross-zonal capacity**. In essence, the selection relied on two high-level indicators:

✓ **Geographical nodal price dispersion** within a bidding zone resulting from TSOs simulations: The higher the dispersion, the higher the scope to manage congestions through better bidding zones delineation.

✓ **The cross-zonal capacity** taken away by loop flows and other internal flows on network elements relevant for capacity calculation. The higher these flows, the higher the scope to increase cross-zonal capacity through better bidding zones delineation.

- Additionally, ACER took into account the configurations previously proposed by TSOs and TSOs' feedback on the configurations initially identified by ACER

Summary of the proposed configurations: Continental Europe

Member State	Individual alternative configurations		Justification
Germany	DE2	ACER clustering algorithm (k-means)	Germany ranked first in terms of nodal price dispersion and flows 'consuming' cross-zonal capacity. The indicators improve when splitting it into 2 or more BZs.
	DE2	TSOs' modifications on ACER clustering algorithm (Spectral P1)	
	DE3	ACER clustering algorithm (Spectral P1)	
	DE4	TSOs' modifications on ACER clustering algorithm (Spectral P1)	
France	FR3	ACER clustering algorithm (Spectral P1)	France ranked the second 'poorest'; however, only one configuration is proposed because the overall improvements when splitting France were not so perceptible as for Germany.
The Netherlands	NL2	ACER clustering algorithm (Spectral DIRC)	The Netherlands and Italy (North) are the third and fourth countries in the ranking. The indicators improve when splitting.
Italy (North)	IT2	ACER clustering algorithm (k-means)	

- In addition:

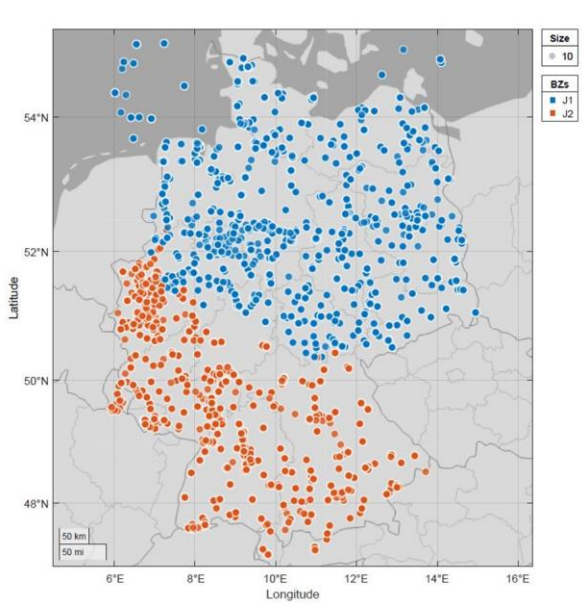
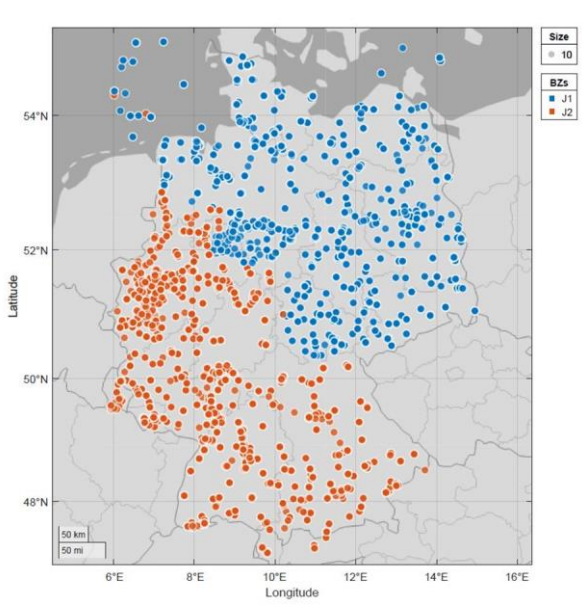
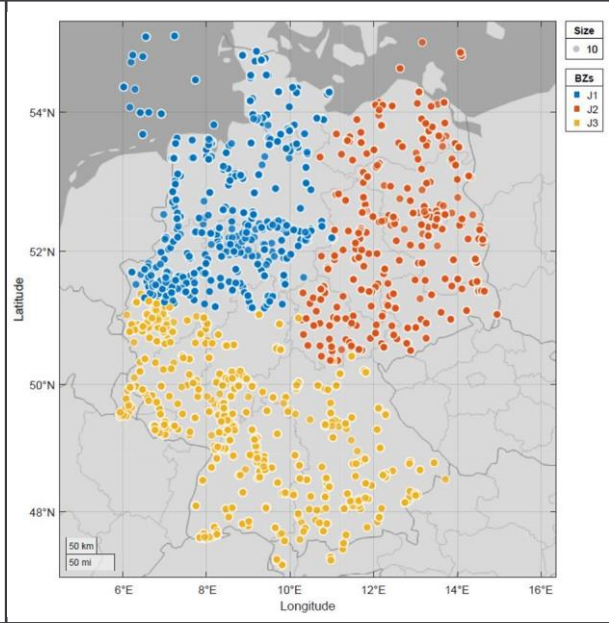
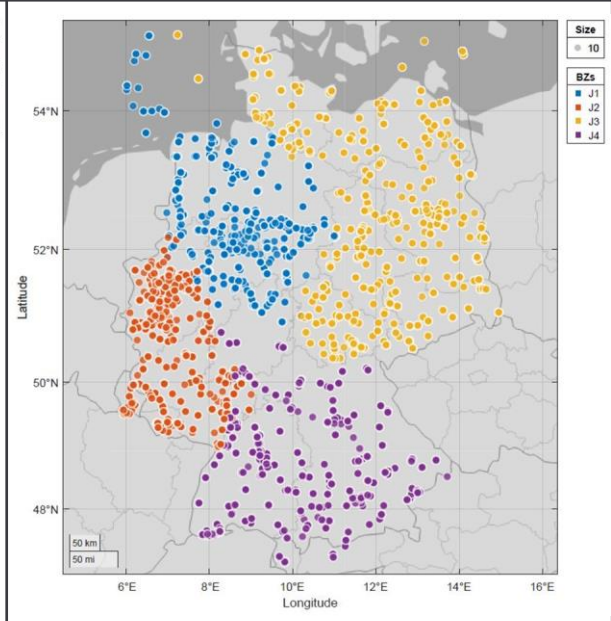
✓ TSOs are requested to study at least the 2 more promising combinations, comprising two Member States and based on the intermediate results obtained during the bidding zone review study (e.g. MSx split into 2 BZs combined with MSy split into 3 BZs)

✓ Fallback configurations better following control area borders were envisaged for Germany, in case challenges with the unique assignment of generation and load units to BZs in the configurations proposed by ACER are found

Summary of the proposed configurations: Nordics

Member State	Individual alternative configurations		Justification
Sweden	SE3	ACER clustering algorithm (Spectral P1)	These alternative configurations in 3 and 4 BZs lead to an improvement for both indicators compared to the status quo. They confirm that the focus of the splits is on the area around Stockholm, in line with the alternative configurations proposed by the Nordic TSOs back in 2020.
	SE3	TSOs' modifications on ACER clustering algorithm (Spectral P1)	
	SE4	ACER clustering algorithm (Spectral P1)	
	SE4	TSOs' modifications on ACER clustering algorithm (Spectral P1)	

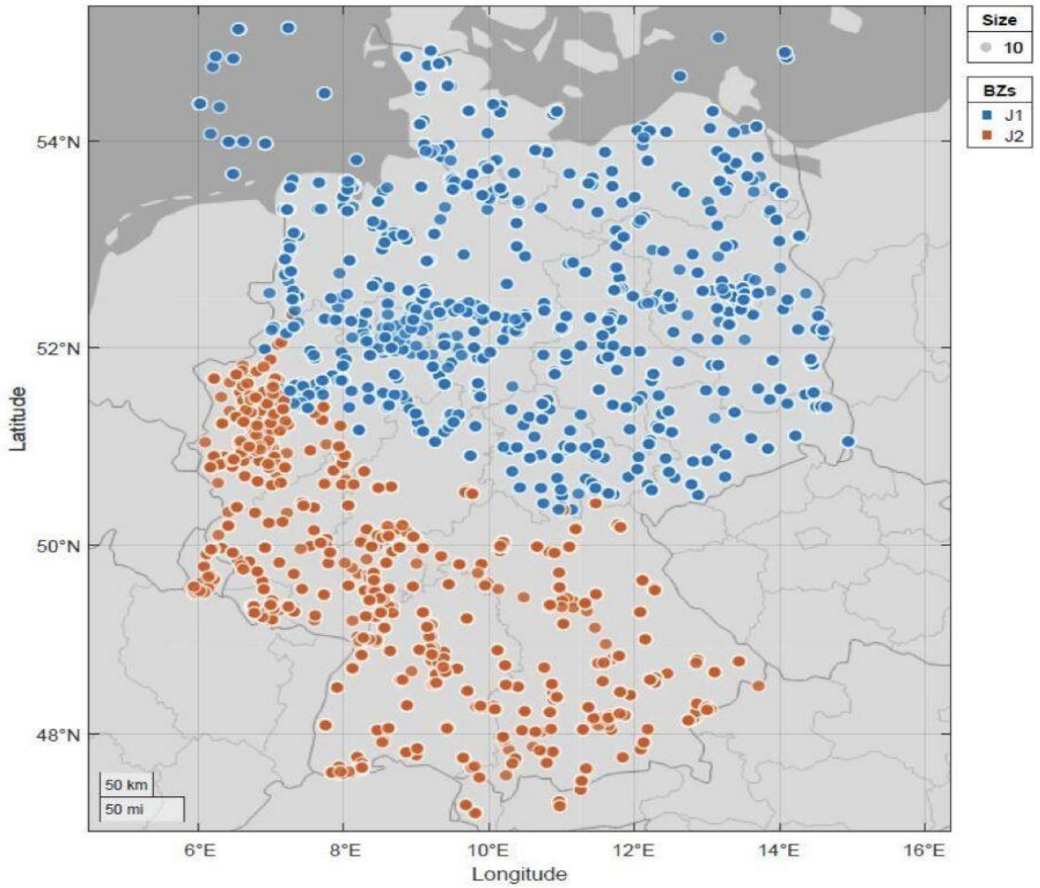
Alternative BZ configurations for Germany

DE2	DE2	DE3	DE4
k-means	Modified version of Spectral P1 following remarks provided by the German TSOs	Spectral P1	Modified version of Spectral P1 following remarks provided by the German TSOs
			
Split of Germany into 2 BZs along the border identified to reduce loop flows and price dispersion within Germany the most.	Modified configurations to accommodate TSOs' comments to facilitate the unique assignment of generation and load units to BZs.	Split of Germany into 3 BZs along the borders identified to reduce loop flows and price dispersion within Germany the most.	Modified configurations to accommodate TSOs' comments to facilitate the unique assignment of generation and load units to BZs.

Correlation or … ?!

Bidding Zone Review Region Central Europe (BZRR CE):

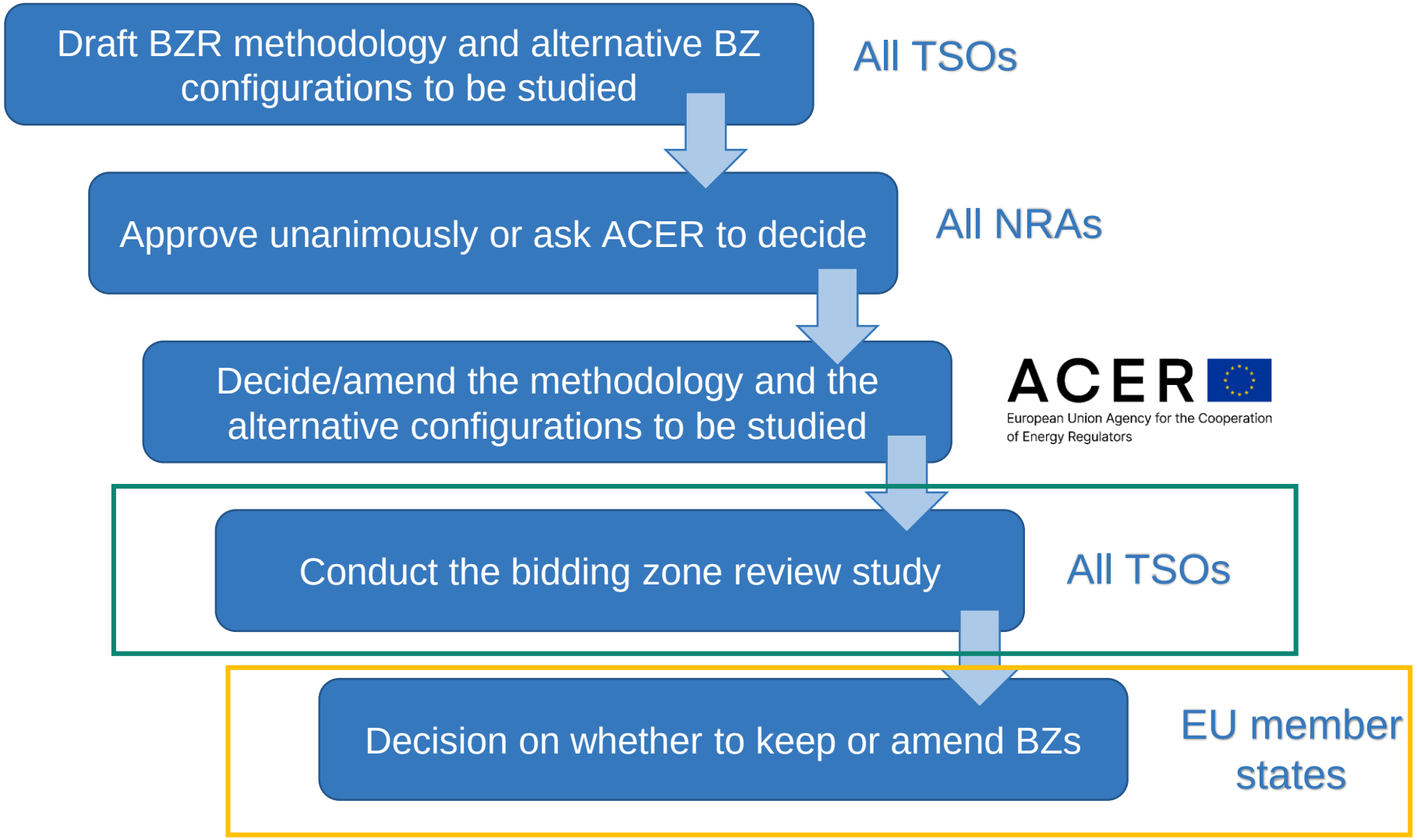
1. **DE2 (k-means)**



Note: J1 and J2 are the two newly-defined German-Luxembourgish bidding zones.

Courtesy of: Martin Klein, Energy Scenarios at 50Hertz

Timeline: Reminder



Next Steps

- Article 14.6 of Electricity Regulation (12 months for TSO review): The TSOs participating in the bidding zone review shall submit a joint proposal to the relevant Member States or their designated competent authorities to amend or maintain the bidding zone configuration no later than 12 months after 8 August 2022;

- Article 14.7 (6 months for MS decision): Based on the proposal submitted by the TSOs, the Member State with identified structural congestion shall, in cooperation with its TSOs, decide, within six months of receipt of the report, either to establish national or multinational action plans pursuant to Article 15, or to review and amend its bidding zone configuration. Those decisions shall be immediately notified to the Commission and to ACER;
- The MSs cannot act by themselves, but only based on the proposal by the TSOs. The clock starts from the moment of receiving the report, but maximum 12 + 6 months;

- Article 14.8 (EC as last resort): For those Member States that have opted to amend the bidding zone configuration, the relevant Member States shall reach a unanimous decision within six months of the notification to the Commission and ACER. In the event that the relevant Member States fail to reach a unanimous decision within those six months, they shall immediately notify the Commission. As a measure of last resort, the Commission after consulting ACER shall adopt a decision whether to amend or maintain the bidding zone configuration in and between those Member States by six months after receipt of such a notification;
- If in the last 6 months no unanimous decision is reached by the MSs, the Commission will adopt a decis consulting ACER. No timeline for the EC's decision is specified. So this would be 12 + 6 + 6 + X months.