

ACER consultation on the influence of existing bidding zones on electricity markets

A EURELECTRIC Response Paper

October 2013

EURELECTRIC is the voice of the electricity industry in Europe.

We speak for more than 3,500 companies in power generation, distribution, and supply.

We Stand For:

Carbon-neutral electricity by 2050

We have committed to making Europe's electricity cleaner. To deliver, we need to make use of **all low-carbon technologies**: more renewables, but also clean coal and gas, and nuclear. Efficient electric technologies in **transport and buildings**, combined with the development of **smart grids** and a major push in **energy efficiency** play a key role in reducing fossil fuel consumption and making our electricity more sustainable.

Competitive electricity for our customers

We support well-functioning, distortion-free **energy and carbon markets** as the best way to produce electricity and reduce emissions cost-efficiently. Integrated EU-wide electricity and gas markets are also crucial to offer our customers the **full benefits of liberalisation**: they ensure the best use of generation resources, improve **security of supply**, allow full **EU-wide competition**, and increase **customer choice**.

Continent-wide electricity through a coherent European approach

Europe's energy and climate challenges can only be solved by **European – or even global – policies**, not incoherent national measures. Such policies should complement, not contradict each other: coherent and integrated approaches reduce costs. This will encourage **effective investment** to ensure a sustainable and reliable electricity supply for Europe's businesses and consumers.

EURELECTRIC. Electricity for Europe.

ACER consultation on the influence of existing bidding zones on electricity markets

A EURELECTRIC Response paper

October 2013

KEY MESSAGES

- Reviewing bidding zones can lead to smaller or bigger bidding zones. EURELECTRIC cautions against reducing the size of existing bidding zones. Larger, also bidding zones across national borders require more efforts but do present more advantages for the functioning of the market than smaller bidding zones when sufficient interconnector capacity exists. Grid reinforcement and/or development is the primary solution to congestion.
- EURELECTRIC believes that reducing/splitting existing bidding zones should be considered only in case of structural congestions which are expected to endure into the future. In such cases, reviewing bidding zones should follow a detailed cost-benefit analysis and impact assessment and should only be considered where other means to address these problems have proved insufficient.
- In addition, we firmly believe that current problems on the network/market such as unexpected loop flows largely result from the lack of integration of renewable energy sources into the market and should thus be tackled from a broader perspective, as part of a holistic approach to managing variability.
- Transparency of the bidding zone process should be ensured by proper involvement of and consultation with market participants. Conclusions on the need to review bidding zones should not be drawn before the collected facts and figures of the technical and the market reports expected to be published under Activity 1 & 2 are available.

WG Market Integration & Network Codes
Ruud OTTER, Chair
Pierre CASTAGNE, Vice-Chair

Contact:
Charlotte RENAUD, Advisor Markets Unit – crenaud@eurelectric.org
Anne-Malorie GERON, Head of Markets Unit – amgeron@eurelectric.org

Executive Summary

- EURELECTRIC welcomes the opportunity to respond to ACER's consultation on the influence of existing bidding zones on electricity markets undertaken in the context of the joint initiative of ACER and ENTSO-E for the early implementation of the Network Code on Capacity Allocation and Congestion Management (NC CACM) with respect to the review of bidding zones. The design of bidding zones is indeed central for the market functioning on a national/European level.

Reviewing bidding zones can lead to smaller or bigger bidding zones. EURELECTRIC cautions against reducing the size of existing bidding zones. Larger, also bidding zones across national borders require more efforts but **do present more advantages for the functioning of the market than smaller bidding zones** when sufficient interconnector capacity exists. Grid reinforcement and/or development is the primary solution which should be pursued before any zone reconfiguration to alleviate congestion is considered. If re-configuration is ultimately then deemed necessary, zones should be merged rather than reduced/split whenever possible once justified by a robust cost-benefit analysis and impact assessment taking into account generation, demand, supply and consumer perspectives.

- EURELECTRIC believes that **reducing/splitting existing bidding zones** should be considered **only in case of structural congestions which are expected to endure into the future** (i.e. in case where it could lead to an increase in cross-border capacity and/or to the unification of physical and trading flows of electricity). In such cases, reviewing bidding zones should follow a **detailed cost-benefit analysis** and impact assessment and should only be considered where other means to address these problems have proved insufficient such as:
 - **grid reinforcement and/or development** based as well on a detailed long-term cost-benefit analysis;
 - **better coordination on the TSOs side** to elaborate a genuine common grid model, in particular regarding:
 - the capacity calculation that should be based on a common methodology but also on shared assumptions on congestion planning and management;
 - sharing costs for cross-border re-dispatch;
 - coordinated approach to abolish the practice of moving congestion to the border.
 - introduction of **transparent countertrade or re-dispatch where relevant**;
 - introduction of the **flow-based calculation where relevant**;
 - coordinated installations of **phase shifters**¹.
- The potential impacts on the splitting/enlargement of existing bidding zones should be thoroughly investigated following a cost-benefit analysis (CBA) including aspects like:
 - **Liquidity and depth** of the market, especially of the forward market;
 - **Stability of commercial transactions and impact on long-term contracts**;

¹ To the extent phase shifters are applied punctually and do not undermine cross-border trade.

- **Impact on hedging possibilities** and disruption of existing commercial strategies that allow utilities to offer stable prices to customers;
 - The **position of most market stakeholders**, and in particular small and new entrant generators and retailers;
 - **Investment conditions**;
 - Risk of **regulatory interventions** in the market and of **market segmentation contrary to the objectives of market liberalisation**;
 - **Political impact**;
 - **Market confidence**.
- In addition, we firmly believe that the current problems on the network/market such as unexpected loop flows, largely result from the lack of integration of renewable energy sources into the market and should thus be tackled from a **broader perspective** and should be part of a **holistic approach to managing variability**, as already stressed in 2011 in EURELECTRIC's Renewable Action Plan.
- Last but not least, **transparency of the bidding zone process** should be ensured by proper involvement and consultation with market participants. We believe that this engagement with market stakeholders is currently missing. In this perspective, the consultation launched by ACER is very much welcomed as the whole process created a strong demand for information and understanding from market participants.

It is crucial that we do not reach any conclusions on the need to review bidding zones before getting the collected facts and figures of the technical and the market reports expected to be published under Activity 1 & 2. EURELECTRIC's members currently experience a **patent lack of information on TSO re-dispatch practices**. We would in particular welcome if ENTSO-E could present facts and figures about the problems experienced by TSOs on the system, but also evidence from their side that reviewing bidding zones is the only and most cost-effective solution to those problems. We would also appreciate if ACER could provide some evidence for their remark that remedial actions are "costly". Our current assessment is that remedial measures are a relatively small part of the budget of TSOs and of consumers' bills.

Questions

1. **How appropriate do you consider the measure of redefining zones compared to other measures, such as, continued or possibly increased application of re-dispatching actions or increased investment in transmission infrastructure to deal with congestion management and/or loop flows related issues? What is the trade-off between these choices and how should the costs attached to each (e.g. re-dispatching costs) be distributed and recovered?**

Investments in transmission infrastructure:

Investments in new transmission lines and reinforcement of existing transmission lines is the only measure which tackles and solves congestion and loop flows permanently and would therefore lead to a massive reduction in re-dispatch. Consequently, we consider investments in transmission infrastructure as most effective and efficient in dealing with congestion and/or loop flows. **New transmission investments and reinforcements should be the primary long-term measure in removing grid congestions**, as they also give additional benefits for market efficiency and credibility. Obviously these investments are most efficient in a situation when TSOs assess the whole grid as one. However, any transmission investment should be based on a cost-benefit analysis in order not to impose a burden on grid users more expensive than the savings on congestions.

Redefinition of bidding zones:

Dynamic factors like future developments in generation structure, renewable energy sources (RES), demand side response, load and grid investments and so forth have to be anticipated in the right manner to shape bidding zones in an effective way. Hence, it is nearly impossible to accurately anticipate the development of these influencing variables far in advance. **Regular reconfigurations of bidding zones would increase uncertainty and risk for market participants resulting in a reduction of investments and market liquidity.** Instead bidding zones should reflect longer term structural congestions, and only where there is limited scope for resolution through network investment.

Furthermore, more urgent inefficiencies should be addressed firstly before splitting bidding zones in order to deal with congestions and/or loop flows. Indeed, the measure of (splitting) bidding zones has only limited effect on specific bottlenecks. Before discussing bidding zone configuration, it is important to improve more structural inefficiencies like cooperation of TSOs and the influence of market interventions. Focus should be on the first issue: cooperation of TSOs. The flow based project shows that TSOs still have a long way to go to really act as one. Obviously this will require time, but the room for improvement possible here should be applied first before putting the burden on the market.

Continued re-dispatch in one bidding zone:

Re-dispatch is a very effective and an efficient remedial measure to deal with both congestions and/or loop flows. As far as loop flows are concerned, they can be in many cases controlled by remedial measures on grid topology, by installing phase shifting transformers or by corresponding re-dispatching measures. Obviously this will require close cooperation of TSOs

Thus, we consider **re-dispatch as very appropriate to deal with congestion and/or loop flows until grid investments come into effect.**

As far as costs are concerned, cost distribution between the TSOs can be based on e.g. cost-benefit analysis on socio-economic welfare gains. In many cases simple methods (e.g. 50/50 or each TSO

covering its own costs) are however sufficient, too. Costs can be recovered, among other means through normal grid tariffs.

2. **Do you perceive the existing bidding zone configuration to be efficient with respect to overall market efficiency (efficient dispatch of generation and load, liquidity, market power, re-dispatching costs, etc.) or do you consider that the bidding zone configuration can be improved? Which advantages or disadvantages do you see in having bidding zones of similar size or different size?**

Bidding zone configuration is only one element in market efficiency. There are many more structural elements that influence market efficiency (e.g. TSO cooperation, market interventions, number of market players). The existing bidding zone configuration in Europe seems mainly appropriate for today's power market as it is reflecting the political reality of national markets. Although, in line with the objective to move towards a single electricity market the idea should move towards merging bidding areas. Periodical review of potential mergers should take place according to predefined criteria (price correlation and potential re-dispatch amounts)

However, as information of especially re-dispatch volumes and costs is lacking, a real assessment cannot be made. In the future, once experience of market coupling and integration is available, merging of some bidding zones could improve market efficiency. Certain small zones could however be merged to (an)other zone(s) by implementing relatively simple grid investments. However, this will require increased harmonisation of energy policy and TSO cooperation. In our view increased energy policy harmonisation and TSO cooperation in system operation have higher influence and should therefore have higher priority than the reconfiguration of bidding zones.

3. **Do you deem that the current bidding zones configuration allows for an optimal use of existing transmission infrastructure or do you think that existing transmission infrastructure could be used more efficiently and how? Additionally, do you think that the configuration of bidding zones influences the effectiveness of flow-based capacity calculation and allocation?**

EURELECTRIC believes that the **current zone configuration, together with widening cross-border re-dispatching and increased cooperation of system operators, would as such allow for quite optimal use of the infrastructure.**

Furthermore, the coming flow-based calculation is intended to further optimise the use of the cross-border infrastructure. Thus **no further delimitations of the current bidding zones should be made before adequate experience has been gathered from the operation of the flow-based calculation and allocation. Current results do not allow for drawing conclusions.** In this context, transparency in the factors for the calculation must be made public in any case. It would not be appropriate to redesign bidding zones in order merely to make it simpler to forecast capacity for the flow based calculation. Indeed TSOs will have much more locational specific information under REMIT and the Transparency regulation for this purpose.

- 4. How are you impacted by the current structure of bidding zones, especially in terms of potential discrimination (e.g. between internal and cross-zonal exchanges, among different categories of market participants, among market participants in different member states, etc.)? In particular, does the bidding zones configuration limit cross-border capacity to be offered for allocation? Does this have an impact on you?**

The main item of discrimination results from the different degree of firmness between internal and cross-zonal transmission rights. We are expecting this to be corrected once the FCA network code is implemented in line with the Framework Guidelines.

With large enough bidding zones that benefit both from sufficient effective interconnection capacity (either/both within or between zones) and adequate use of remedial measures, the TSOs should and can provide equal market access for all market participants. Based on re-dispatching costs etc., the TSOs could be given a financial incentive to invest in additional internal transmission capacity when needed. Assuming equal efficiency from congestion management measures (zone configuration and re-dispatch) the choice between the two only leads to another welfare distribution in the relevant market. Limitations in cross border capacity between markets are more influenced by primarily a lack of infrastructure investment and a lack of coordination among TSOs

- 5. Would a reconfiguration of bidding zones in the presence of EU-wide market coupling significantly influence the liquidity within the day-ahead and intraday market and in which way? What would be the impact on forward market liquidity and what are the available options to ensure or achieve liquidity in the forward market?**

The integration of the European day-ahead and intraday markets is on-going as an important building block for the achievement of the Internal Energy Market. Possible reconfigurations of bidding zones could seriously hurt and delay this process. It would also give a negative incentive to the cooperation of TSOs, as the burden of handling cross border congestion is moved to the market.

The stability of bidding zones is crucial for the forward market and the availability of liquid price hedging options for all market participants. Large enough bidding zones avoid big price spreads and other hedging problems for market participants. Lowering the number of market participants would be accompanied by higher bid/ask spreads. Consequently, price risk hedging tends to be more challenging even with the help of CfDs and transmission rights (if these are available). Taking into account that bidding zones may be adjusted according to current physical conditions in the future, this would undermine market participants' confidence in, and opportunities to hedge on, forward markets and this would have a knock on effect on retail markets.

As a last resort, if, having already considered the impacts and potential benefits of grid reinforcing or investment in the first place, zone reconfiguration is justified by a CBA and impact assessment, enlargement rather than reducing bidding zone size is preferable as it may result in higher churn rates and market liquidity and this would benefit competition and consumers.

A paradigmatic example could be the Iberian market.

The Iberian Peninsula is currently divided into two bidding zones, corresponding to Spain and Portugal, under the operation of REE and REN respectively.

Since the beginning of the Iberian Market (MIBEL) in 2006, increased price convergence has led to a situation in which currently (2013) less than 11% of the hours show a price spread. In these hours, the amount of energy that would have to be re-dispatched to achieve a single price averages just 259 MW.

The forward markets quote only products indexed to the Spanish price. In 2010 and for the first time, forward trading volumes outweighed the physical demand, reaching as much as 272 TWh in 2012. There are no similar hedging opportunities in Portugal, where suppliers partially hedge using the products linked to the Spanish price and accepting the basis risk. REE auctions CfDs twice a year, but the amount is just 400 MW and the product is not traded in secondary markets.

Introducing a single price zone in Iberia with a coordinated re-dispatch procedure right after the day-ahead market will have the following benefits:

- It eliminates the basis risk when trying to hedge Portugal in the forward markets, fostering competition in the supply business in Portugal.
- It will further improve competition in the Iberian market, with the main utilities having a smaller share of the production in the integrated area.
- It will not introduce any distortions, as the costs of re-dispatch will not be socialised among the countries, bearing each TSO the cost of the re-dispatching needed in its own area.
- The coordination of the re-dispatch actions will eliminate some distortions, as it is the case for the preventive capacity reductions introduced by the TSOs in the day-ahead market during the periods of high hydro production.

6. Are there sufficient possibilities to hedge electricity prices in the long term in the bidding zones you are active in? If not, what changes would be needed to ensure sufficient hedging opportunities? Are the transaction costs related to hedging significant or too high and how could they be reduced?

Fundamentally, bidding zones should be stable to facilitate sufficient possibilities to hedge forward electricity prices and offer the required degree of price stability to consumers. Smaller bidding areas reduce liquidity, increase hedging transaction costs as is currently evident in markets across Europe. Hence, **any discussion about a splitting of bidding zones leads to a deterioration of hedging possibilities and thus weakens the market.**

To ensure sufficient hedging opportunities in a longer time horizon a higher market liquidity and stable regulatory framework are needed. For that, the principles of an integrated European electricity market should be pursued strongly. As a consequence, the increased integration of various existing bidding areas is expected to improve market liquidity in both short term and forward markets, which should be accompanied with lower transaction costs and lower forward risks.

7. Do you think that the current bidding zones configuration provides adequate price signals for investment in transmission and generation/consumption? Can you provide any concrete example or experience where price signals were/are inappropriate/appropriate for investment?

EURELECTRIC is of the opinion that it is unclear whether the current situation provides adequate price signals for investment. This is mainly because there is hardly any cross border re-dispatch, re-dispatch costs and volumes are not visible and it is unclear whether re-dispatch mechanisms are efficient. The TYNDP also is not based on this information and is still more a sum of national analyses than a joint network plan.

Transmission investments should be carried out on the basis of a long term cost-benefit analysis in a regulated framework and not only on (short term) price signals. Furthermore these CBAs should be consistent with CBA for other timeframes in congestion management. Within one bidding zone, related re-dispatch measures which lead to costs attributable to a specific line may help to identify new grid investments. Consequently, a significant number of re-dispatch actions related to a specific transmission line provide an adequate signal to reinforce that specific line or to invest in new ones. TSO incentives for investment are critical. Between bidding zones, the congestion income must primarily be used for remedial measures or grid investments according to the EU Cross-Border Regulation which obligation should be enforced by market regulators as and when required.

In addition, EURELECTRIC believes that setting incentives for investments in generation through the reconfiguration of bidding zones is not effective. Price formation in bidding zones is influenced by a number of factors beyond the generator's sphere of influence (investments in grid reinforcement or generation assets). Such decisions on the part of any third parties result in unforeseeable movements of price levels. In contrast other location factors, like renewables support schemes, the proximity to harbours, the use of existing power plant sites or the availability of cooling water or gas pipelines, are much more decisive criteria for plant localisation.

The most important prerequisite for setting effective price signals in generation is that these price signals are reliable in the long-run and do not succumb to unanticipated changes in the future; because investments in generation are long-term oriented. In this context bidding zones and their possible reshaping in the future constitute an additional risk factor which would harm investors' planning security and could result in a disincentive to invest.

8. Is market power an important issue in the bidding zones you are active in? If so, how is it reflected and what are the consequences? What would need to be done to mitigate the market power in these zones? Which indicator would you suggest to measure market power taking into account that markets are interconnected? (This information would be primarily useful for ENTSO-E when performing the bidding zone review process (Activity 4))

Large and/ or cross-border bidding zones with sufficient interconnection, integrated day-ahead, intraday and balancing markets, and increased effective cross-border interconnection capacities, together with transparent balancing and re-dispatching services, and high liquidity in hedging markets are the basis for well-functioning markets. Transparency on all costs incurred in congestion management is essential in this respect. Grid reinforcement/development, stability (of bidding areas) and access to liquid hedging are key to improving market power issues.

Regarding indicators: no single indicator is thus sufficient to measure the level of competition. Besides EURELECTRIC very much doubts whether the assessment of market efficiency is a task for ENTSO-E. We see this as one of the primary tasks of the regulators/ACER.

9. As the reporting process (Activity 1 and Activity 2) will be followed by a review of bidding zones (Activity 4), stakeholders are also invited to provide some expectations about this process. Specifically, which parameters and assumptions should ENTSO-E consider in the review of bidding zones when defining scenarios (e.g. generation pattern, electricity prices) or alternative bidding zone configurations? Are there other aspects not explicitly considered in the draft CACM network code that should be taken into account and if so how to quantify their influence in terms of costs and benefits?

As stated before, we see the discussion on the configuration of price zones as part of a market efficiency assessment. Market efficiency should be assessed by regulators/ACER and not by TSOs that may have incentives that influence the result.

However, part of the information will have to come from the TSOs. They will have to provide the physical part of the information. This will include information of network element loading in relation to commercial flows and explaining the ex-ante and remedial actions they have taken. The second part of the information would be focussed on the future. Based on the assumptions of the TYNDP they should build one load flow model for that period. To allow for a truly European approach the analyses should follow a stepwise approach based on the physical and market scenarios of the TYNDP:

- Analyses of the system from the European perspective with indications of the structural bottlenecks
- Analyses of the system with the current price zone configuration leading to identification of the efficiency loss
- Analyses of the system with the current price zone configuration and the level of operational coordination leading to identification of efficiency loss compared to the previous scenario.
- Recommendations for improvements (could be e.g. operational, re-dispatch of price zones)

Together with the criteria enumerated in the CACM network code, the potential impacts on the splitting/enlargement of existing bidding zones should be thoroughly investigated following a cost-benefit analysis including aspects like:

- Liquidity and depth of the market, especially of the forward market;
- Stability of commercial transactions and impact on long-term contracts;
- Influence on hedging possibilities and disruption of existing commercial strategies that allow utilities to offer stable prices to customers;
- Assessment of the position of most market stakeholders, and in particular of small and new entrant generators and retailers;
- investment conditions;
- Risk of increased regulatory interventions in the market and of market segmentation contrary to the objectives of market liberalisation;
- Political impact;
- Market confidence.

Besides the above mentioned impacts on the electricity markets, investments and competition other economic effects have to be taken into account. These are especially transaction costs, which occur by the splitting of bidding zones like:

- adjustment of delivery points in all existing and legacy contracts;
- renegotiation of contracts which may lead to massive losses;
- traded forward products;
- re-organisation costs;
- IT costs and;
- other costs for the society, e.g. adjustment of Renewable Energy Laws and subsidising systems and so forth.
- Additional efforts are needed if borderlines of bidding zones cross balancing areas.

It is very important that the impacts of bidding zone delimitation on electricity retail companies and electricity consumers are taken into account.

These increased transactions costs will be passed through to market participants and ultimately customers, who will have to face higher electricity prices.

10. In the process for redefining bidding zones configuration, what do you think are the most important factors that NRAs should consider? Do you have any other comments related to the questions raised or considerations provided in this consultation document?

The most important factor that NRAs should consider is market efficiency. Hence, all actions which reduce competition, transparency and market liquidity (in short term markets, forward markets and retail markets in particular) will substantially harm market participants and should be avoided in any zone re-configuration.

The NRAs should also check that the TSOs use adequate remedial measures in order to avoid restrictions on cross-border transmission capacities due to internal grid stability and adequacy. Any decision relating to existing bidding zones configuration should only be made following a detailed cost-benefit analysis and impact assessment and provided that other means to address these problems have proved insufficient such as grid reinforcement and/or development in the first instance, genuine (one) common grid model, coordination of TSOs 'acting as one', sharing costs for cross-border re-dispatch, etc. No review should be undertaken neither before or at least until enough experience is gathered from the expected benefits of the coming flow-based capacity calculation and allocation and quantitative information is made available.

Furthermore, Europe is trying to integrate markets to optimise the overall market and avail of efficiencies from natural competencies in different member states, e.g. capacity surpluses, different technologies' advantages (e.g. wind etc.). Splitting bidding zones could jeopardise the sharing of these competencies. The problem is that there is no obligation on TSOs to take notice of this signal and build the required infrastructure. EURELECTRIC urges ACER to take such issues into consideration when determining whether a bidding zone re-configuration would be more economical and at the same time be able to preserve the objective of market integration as mentioned above. Therefore no change should be implemented before at least enough experience is gained from the expected benefits of market coupling and of the coming flow-based capacity calculation and allocation where applicable.

Finally, both the Technical report prepared by ENTSO-E and the Market Report prepared by ACER is necessary background information in any bidding zone evaluation or configuration process. At the moment it is not clear if the technical report will be published at all. This means that decisive information on the state of the transmission grids is not transparently made available to all interested parties.

To conclude, EURELECTRIC believes that the discussion on bidding zones is premature as there is much room for improvement coming from further integration, increased TSO cooperation, investments in grid infrastructure and implementation of the target market model through the codes. A parallel process on price zones configuration will trigger many sensitive issues and delay the integration process and is therefore counterproductive. It is necessary that any review of a bidding zone, whether for splitting or enlargement reasons, should only be considered once it has in the first instance been investigated whether grid infrastructure or new investment can alleviate or facilitate the issues of congestion and/ or loop flows. Only when such investigation has been carried out, as well as the possible benefits of TSO cooperation and phase shifters for example, should a robust cost-benefit analysis and impact assessment that justifies the need for zone reconfiguration be acceptable.

EURELECTRIC pursues in all its activities the application of the following sustainable development values:

Economic Development

▶ Growth, added-value, efficiency

Environmental Leadership

▶ Commitment, innovation, pro-activeness

Social Responsibility

▶ Transparency, ethics, accountability



Union of the Electricity Industry - EURELECTRIC aisbl
Boulevard de l'Impératrice, 66 - bte 2
B - 1000 Brussels • Belgium
Tel: + 32 2 515 10 00 • Fax: + 32 2 515 10 10
VAT: BE 0462 679 112 • www.eurelectric.org