

Position Paper

ACER – Consultation on bidding zones “The influence of existing bidding zones on electricity markets”

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Introduction

The German Association of Energy and Water Industries (BDEW)¹ represents over 1,800 members of the electricity, gas and water industry. In the energy sector, we represent companies active in generation, trading, transmission, distribution and retail. BDEW welcomes the opportunity to respond to ACER's consultation on the influence of existing bidding zones on electricity markets that is 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 (CACM) with respect to the review of bidding zones.

General Remarks

BDEW would like to stress the importance of large bidding zones for an efficient internal electricity market. A uniform wholesale market price enforces liquidity, provides robust instruments for hedging and allows for strong competition.

BDEW responds to the questions mainly in light of the highly successful German-Austrian bidding zone where high levels of market liquidity and competition can be observed. It is BDEW's firm belief that the establishment of the internal market for electricity can be fostered, if other markets implement bidding zones of a similar or larger size or directly join the German-Austrian bidding zone.

BDEW would like to remind ACER that the zonal market design is not only the European Target Model, but has also proven to enable markets to be more robust and efficient. Nodal pricing, which is mentioned in the paper may have theoretical and technical merits, but has failed to demonstrate to provide superior benefits to the market. In fact, it can be seen that its introduction has caused significant problems of overall market functioning.

BDEW would urgently advise ACER to look more closely at the costs of redispatching as BDEW does not share the view that remedial actions are "costly". In fact, all available data suggests that costs for remedial actions are only a small part for the costs to safely operate the system network.² In addition, economic costs for remedial actions are low. It is important to note that the TSOs' expenses for re-dispatch include the (unavoidable!) costs of congestion in the existing system. There are only additional costs, when TSOs do not pick the ideal power plants for re-dispatch according to the optimal merit order; however, these cost effects are insignificant, compared to the benefits of a larger market with more liquidity and competition.

¹ The European Network of Transmission System Operators for Electricity (ENTSO-E) has been invited by the ACER to initiate the Bidding Zone review process. The German Transmission System Operators are currently contributing to this early implementation of the NC CACM provisions concerning the Bidding Zone Review. This process involves the drafting of a Technical Report in 2013 and the actual Bidding Zone Review in the year 2014. This BDEW position paper does not anticipate the outcome of this technical review process.

² Bundesnetzagentur und Bundeskartellamt, *Monitoringbericht 2012*, page 80, 5.2.2013

BDEW agrees with ACER that costs for the network are being recovered by transmission tariffs as is the design of the transmission tariffs. It is clear that regulators should continuously challenge these costs to reduce tariffs for consumers including sufficient analysis of opportunity costs. BDEW is not convinced that a small reduction of tariffs is reasonable when significant additional costs are incurred at other points.

BDEW is fully aware of the issue of so-called loop flows and shares the view that solutions must be found. The best solution is to improve the transmission networks. Therefore, investments in networks must be a key priority.

In general, BDEW believes that it is essential to have accurate analysis of the situation and potential measures. BDEW therefore proposes to have proper exchange of all involved parties on how markets can be improved (and this must be done on an at least regional level) by abolishing any barriers for free trade (e.g. additional charges; rules that reduce trading).

BDEW would like to point out that market liquidity still needs to improve in all the European electricity markets. This is even the case for the German/ Austrian bidding zone, which indicates the highest level of liquidity across Europe. In any case, BDEW cannot follow the line of argumentation on liquidity brought forward in the consultation document. It does not reflect the reality and thus BDEW does not agree with ACER's new approach to define liquidity and rejects it firmly as misleading. Liquidity is defined as the ability to buy and sell at any time in the market without causing relevant price changes. If a market is split into smaller bidding zones, liquidity depends on the availability of interconnectors between the new zones. Even if interconnectors are efficiently used, a market split will take place if the interconnection capacity is congested. In these situations, the number of market participants and the level of supply and demand is clearly reduced compared to the combined bidding zone. Since market splitting is expected to take place when markets are tight (and liquidity is needed the most), small bidding zones have a significant welfare reducing effect.

BDEW agrees that there would be cross-border trading to some extent, but liquidity would either concentrate in the bigger bidding zones, while decreasing liquidity in the smaller one, or simply be split between newly created small bidding zones. Furthermore, liquidity in long-term markets would most likely decrease under the threat of a biannual review of bidding zones as proposed in the current draft of the CACM Network Code. Although there is a commitment towards stable bidding zones in the long run, market participants cannot completely rule out to face frequent reviews of bidding zones. It is likely to therefore see a reluctance of market participants to hedge in forward markets.

BDEW would like to stress that hedging is primarily done by energy companies to offer end customers stable prices. It is therefore crucial to have fundamentally robust markets that allow for a sufficient degree of forward hedging. This is only possible in large and liquid zones; this becomes evident as it can be observed that the EEX price is commonly used as a reference price to hedge positions by foreign market participants in other market areas.

BDEW supports ACER's analysis that a full European copper plate is costly to build and probably no efficient solution for now. However, where (like in Germany) a liquid market al-

ready exists, network expansion to maintain this market is fully justified. This is why Bundesnetzagentur has launched a comprehensive network extension project and has approved the necessary funds. When the question occurs to merge bidding zones (an idea that BDEW strongly supports), it must be decided on a case-by-case basis whether network enhancements are necessary and efficient.

In this context, BDEW would also highlight that regular reconfigurations of bidding zones create severe problems for market participants. In particular, the risk of zonal changes creates an additional obstacle for new investments into generation capacity. Right now, capacity remuneration mechanisms are discussed or implemented all over Europe. The perspective of these instruments is far beyond the horizon of even the liquid forward markets. Reconfigurations of bidding zones will create unnecessary interference with these developments in market design.

BDEW does not agree with ACER's market power analysis. In contrast, the difficulty to access markets is a key issue in small zones. Especially with the lack of full market harmonization it can be seen that this is an issue. It seems evident, that more market participants active in a given area will lead to more competition and in turn will lead to higher liquidity. Cross-border trading may reduce market power, but not as efficiently as does a larger bidding zone.

For a topic with such a political dimension with so many far-reaching consequences BDEW urges ACER not only to formally consult market parties by way of one-off consultation, but rather to institutionally include market parties in the process, which ENTSO-E and ACER need to perform under CACM. Therefore, BDEW would like to emphasise that all relevant market participants (i.e. trader, supplier, generator, customer) need to be involved and be heard.

As a general point, BDEW clearly urges relevant stakeholders to consider enlarging bidding zones rather than propose market splitting. In the case of the German/Austrian bidding zone, we do see essential benefits in keeping/enlarging this zone.

Questions

- 1. How appropriate do you consider the measure of redefining zones compared to other measures, such as, continued or possibly increased application of redispatching 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. redispatching costs) be distributed and recovered?**

BDEW does not see how splitting (liquid) price zones with its limited positive effects should even be considered in light of all the negative potential. BDEW does not agree with experimenting with the zones and does not see any alternative in trying all other measures first.

Redefinition of bidding zones

The measure of (redefining) bidding zones has only limited effect on specific bottlenecks since it does not allow for selective load reduction. The analysis of redispatching by the BNetzA has also shown that the specific bottlenecks are rarely stable.³

Furthermore, there is no clear positive effect on loop flows. This is especially due to the challenges to find the optimal cutting and layout of bidding zones. In terms of congestion management the borders should cut overloaded lines. The problem lies in the fact that load flows in the highly meshed German grid with a big share of generation from fluctuating renewable energy sources are changing frequently while bidding zones for a number of reasons must be stable for a long period. Finding a new design that will be sufficient even for most times is highly unlikely.

Dynamic factors like future developments in generation structure, RES, 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 anticipate the development of these influencing variables right in advance; bidding zones are not effective in dealing with congestions and /or loop flows. Consequently, they tend to be not stable in the future. This, however, would lead to massive uncertainty of all market participants resulting in a plunge of investments and market liquidity. Further, bidding zones are not able to deal with congestion and/or loop flows in an efficient way; due to the congestion itself is not solved. Hence, redispatch would still be inevitable. This redispatch could be less efficient, compared to the redispatch in one bidding zone. Finally, the redefinition of bidding zones would lead to fewer incentives for investments in transmission infrastructure, which would lead to further aggravation of grid related issues in the future.⁴

³ Bundesnetzagentur, *Bericht zum Zustand der leitungsgebundenen Energieversorgung im Winter 2012/13*, pages 23-24, 20.6.2013

⁴ Moser, A. / Breuer, C. / Drees, T. (IAEW RWTH Aachen), *Impact of a German/Austrian market splitting on the electricity markets and the transmission grid in CEE*, 2012, S. 16ff;

Continued redispatch in one bidding zone:

Redispatch is a very effective and an efficient remedial measure to cure both congestion and/or loop flows. Both grid related issues can be tackled very efficient in the short-term by redispatch of generation either within Germany or in case of loop flows by cross-border redispatch. Further, redispatch is more efficient in one bidding zone than in different zones.⁵ Thus, we consider redispatch as very appropriate to deal with congestion and/or loop flows until grid investments come into effect.

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 redispatch.⁶ Consequently, we consider investments in transmission infrastructure as most effective and efficient in dealing with congestion and/or loop flows. Thus, this measure should be pursued with highest effort in the future.

Summary

BDEW considers the redefinition of bidding zones as an inappropriate measure to deal with congestion and/or loop flows due to its limited capability to tackle the issue of not sufficient grid infrastructure itself. In fact, it may hinder new investments in transmission infrastructure.

BDEW considers investments in transmission infrastructure as the only long term measure to tackle congestion and/or loop flows permanently. However, investments in new transmission lines cannot be realised on a short notice, redispatch should be the measure in the meantime as it deals with congestion and /or loop flows very effectively.

Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 14ff + 31ff + 56ff + 75ff; Maurer, C. (Consentec), *Auswirkungen von Netzengpässen auf den deutschen Energiemarkt*, 2012, S. 8f.

⁵ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 17ff; Maurer, C. (Consentec), *Auswirkungen von Netzengpässen auf den deutschen Energiemarkt*, 2012, S. 4ff + 41ff; Moser, A. / Breuer, C. / Drees, T. (IAEW RWTH Aachen), *Impact of a German/Austrian market splitting on the electricity markets and the transmission grid in CEE*, 2012, S. 29.

⁶ Moser, A. / Breuer, C. / Drees, T. (IAEW RWTH Aachen), *Impact of a German/Austrian market splitting on the electricity markets and the transmission grid in CEE*, 2012, S. 29f; Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 14ff + 32f + 39ff; Maurer, C. (Consentec), *Auswirkungen von Netzengpässen auf den deutschen Energiemarkt*, 2012, S. 8f.

The costs for redispatch should be covered by the grid operators to set incentives for investments in transmission infrastructure. Higher costs can be covered via the transmission tariffs by the grid operators. Regulators are in charge to verify that these extra costs are in relation with remedial actions. In this context, the redispatched generators should be fully compensated according to its actual dispatch costs (including all opportunity costs and incurred start-/stop costs).

- 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, redispatching 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?**

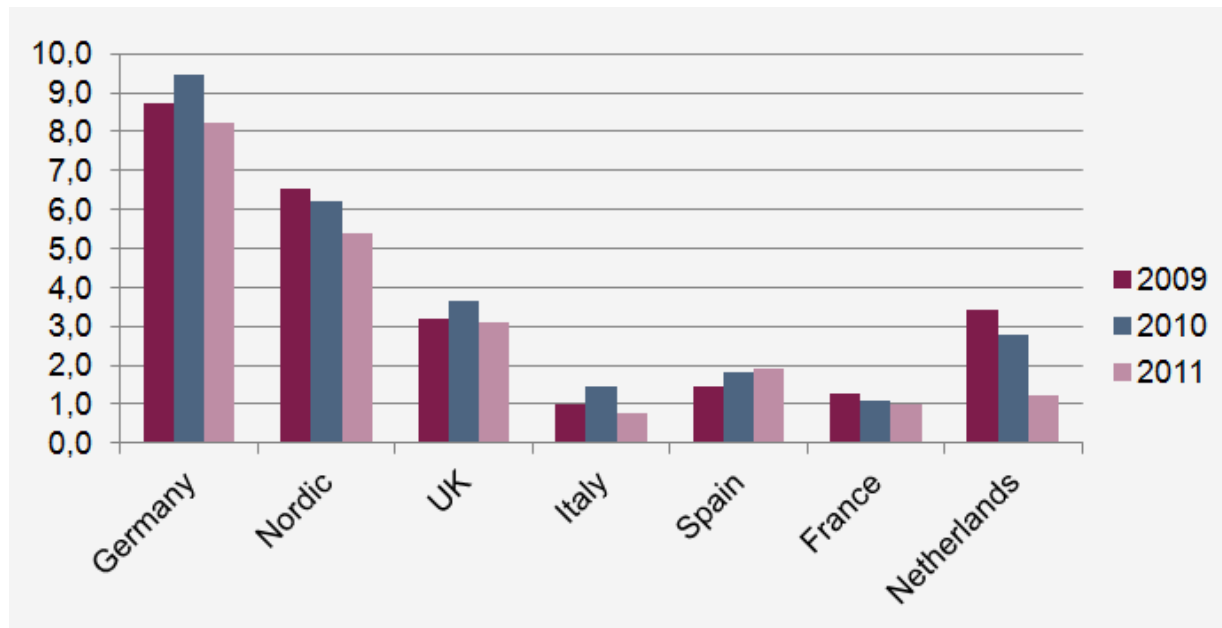
BDEW perceives the current zone configuration very appropriate with respect to overall market efficiency.

Frontier Economics and Consentec point out that market efficiency is related to the size of the electricity market. In this context the German/Austrian bidding zone represents the biggest connected electricity market which results in the most liquid power market in Europe.

Picture 1 underlines that analysis when looking at the churn rate⁷ for the major markets.

⁷ Figures are based on own research: churn rate is calculated as total traded volume over total consumption

Picture 1: Churn Rate Analysis for major European Electricity Markets⁸



This indicates that relatively bigger bidding zones provide significant advantages in terms of market efficiency compared to smaller ones. In detail market splitting is likely to have a negative impact on market liquidity.⁹ Consequently, an adjustment of bidding zones should rather be a merger of existing bidding zones than splitting of existing bidding zones.¹⁰

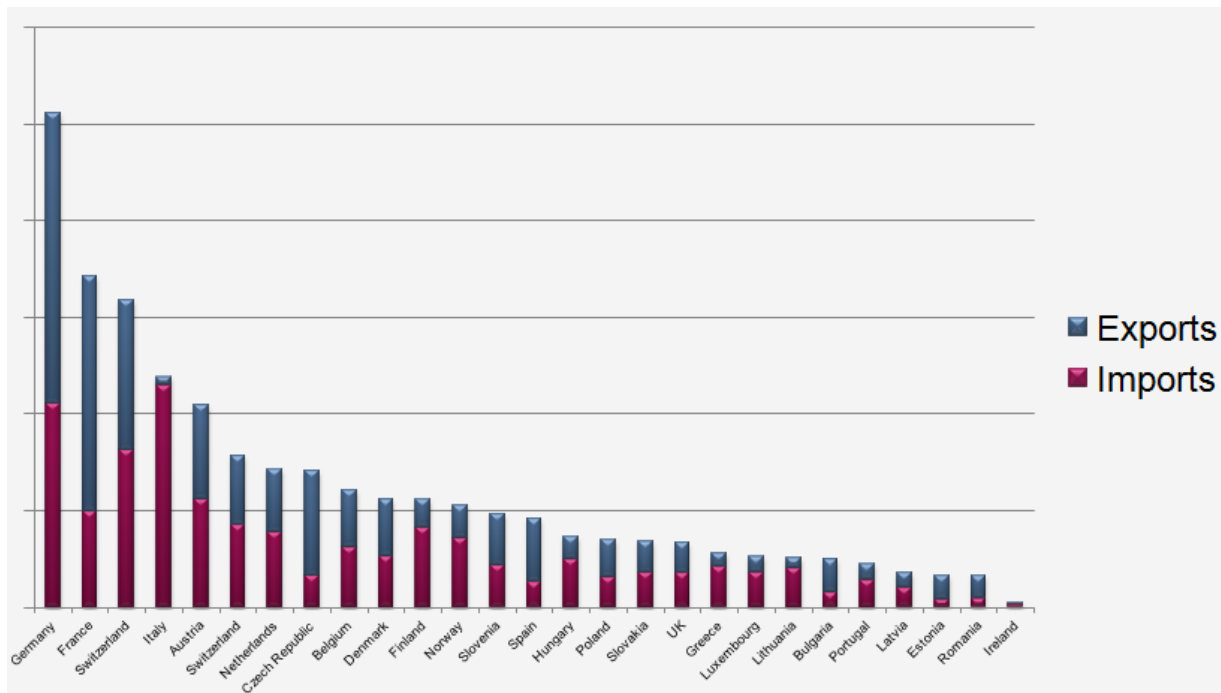
Picture two shows physical imports and exports in Europe. Germany is a major transit country for physical flows. This is in line with the European Target Model and even more so with EU goals. It should rather be analysed how these successes can be replicated for markets that are not yet integrated to such a degree.

⁸ Based on own BDEW research

⁹ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 23ff + 59ff + 88ff.

¹⁰ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 117ff

Picture 2: Cross-border imports and exports¹¹



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?

Yes, BDEW is convinced that the existing bidding zones allow for an optimal use of transmission infrastructure if market coupling is performed effectively. Furthermore, according to Frontier Economics and Consentec a dynamic consideration of expected loop flows in terms of the net transfer capacity assessment, e.g. day-ahead or intraday, would help to increase cross-border transmission rights. In a flow-based allocation is this fact entirely solved, which therefore provides a substantial step forward. However, this is not naturally contingent on the size of bidding zones but rather on the network model in general.¹²

The effectiveness of flow based capacity calculation should be unaffected by bidding zone design. However, smaller zones reduce the complexity of forecasts. As BDEW has already

¹¹ Based on own BDEW Research based on physical flows

¹² Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 16ff.

demanded, transparency in the factors for the calculation must be made public in any case. Simplicity to forecast capacity for the flow based calculation should not be the basis for a bidding zone redesign.

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?

BDEW cannot see an impact by discrimination in Germany. Furthermore, the existing bidding zone configuration (Germany/Austria) does not limit cross-border capacity since no congestion is shifted to the borders.¹³

Bidding zone reconfigurations would not lead to a relief of a temporary congested transmission line.

BDEW would propose to investigate potential enlargements of existing zones as it could add to additional market benefits.

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?

As already outlined under question 2), a reconfiguration of bidding zones would definitely have a negative impact on market liquidity, which is evident due to the altering number of market participants. In the case of more and smaller bidding zones, traded volumes on spot and derivative markets is very likely to be split between these. On the forward market it may also happen that trading participants chose the biggest bidding zone for trading; hence, liquidity would be bundled in only one or a limited number of bidding zones and dry out in others. The costs of hedging for trading participants being located in the smaller bidding zones would increase accordingly.

Regarding the short-term market this can be implicitly concluded from the fact that the DE/AT bidding zone has the highest churn rates in Europe. Similar effects we would expect for the

¹³ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 10ff.

forward markets. Less market participants would be accompanied by higher bid/ask spreads. Consequently, price risk hedging tends to be more challenging and more costly – especially cross-zonal as transmission rights need to be considered. For the cases where CfDs have been introduced, liquidity in these instruments significantly lags behind expectations which even more so negatively impacts on hedging options. Taking into account that bidding zones may be adjusted according to current physical conditions in the future, this would create a massive issue for market participants to hedge on forward markets.¹⁴

In contrast, enlarging bidding zones would result in higher churn rates and market liquidity, respectively. BDEW therefore urges ACER to consider enlarging bidding zones as the primary goal.

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 over time to facilitate sufficient possibilities to hedge electricity prices. Hence, any discussion about a splitting of bidding zones already leads to a deterioration of hedging possibilities and reduces the robustness of market conditions.

Furthermore, the current market conditions regarding the German electricity market allow for a sufficient hedging at most up to three years. However, this time horizon is considered rather as mid-term instead of long term. Consequently, a sufficient hedging in the long term is not properly achievable. 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. The pending risk of a biannual review of bidding zone, as foreseen in the current draft of the CACM Network Code, is a further threat to the long-term liquidity in Germany/Austria. As a consequence, the extension of bidding areas is expected to improve market liquidity in both short term and forward markets, which should be accompanied with lower transaction costs.¹⁵

¹⁴ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011; Maurer, C. (Consentec), *Auswirkungen von Netzengpässen auf den deutschen Energiemarkt*, 2012, S. 24ff + 104ff.

¹⁵ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 68ff + 105f + 117ff.

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?

BDEW is of the opinion that the current bidding zone configuration provides adequate price signals for investment in transmission lines. The TYNDP also provides a good framework for necessary investments.

Also locally related redispatch measures which lead to cost attributable to a specific line help to identify new investments. Consequently, a significant number of redispatch related to a specific transmission line provides an adequate signal to reinforce this specific transmission line or to invest in new transmission lines. The confirmation of the current “Netzentwicklungsplan Strom 2012” (plan for the development of the electricity grid in Germany) may serve as a proper example. In this the German regulator, Bundesnetzagentur (BNetzA), confirms for a multitude of planned grid investments that they will lead to a substantial reduction of redispatch measures in Germany.¹⁶

In addition, BDEW thinks that setting incentives for investments in generation with the help 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 and do not serve as a long-term investment incentive. In contrast other location factors, like the proximity to harbours, the use of existing power plant sites or the availability of cooling water, are much more decisive criteria for plant localisation.¹⁷

Most important prerequisite for setting effective price signals in generation is that these price signals are reliable in the long-run and are not succumbing 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 the investors planning security and could result in a plunge of investments.

BDEW would therefore urge all stakeholders to confirm their commitment to existing bidding zones, analyse potential enlargements and focus on finding adequate solutions for the challenges that the electricity industry faces.

¹⁶ Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen (BNetzA), *Bestätigung Netzentwicklungsplan Strom 2012*, 2012.

¹⁷ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 45ff + 95ff.

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))

No, market power is not an important issue in the German-Austrian bidding zone. Frontier Economics shows that market concentration has significantly declined in Germany over the last years and will continuously decline in the future.¹⁸

Furthermore, the German Competition Authority, Bundeskartellamt (BKartA), outlines that they did not find any proof of an abuse of market power.¹⁹ In addition generation from RES increased further significantly in the last three years, therefore it can be concluded that market power is not an issue in Germany. Especially including Austria, due to Germany/Austria are defining one bidding area, has a further mitigating effect on market shares. However, it is evident that any splitting of bidding zones would result in higher market concentration and market power, respectively.²⁰

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?

Besides the above mentioned impacts on the electricity markets, investments and competition also 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,

¹⁸ Frontier Economics, *Marktkonzentration im deutschen Stromerzeugungsmarkt*, 2010.

¹⁹ Bundeskartellamt, *Sektoruntersuchung Stromerzeugung Stromgroßhandel, Bericht gemäß § 32e Abs. 3 GWB*, 2011.

²⁰ Frontier Economics / Consentec, *Relevance of established national bidding areas for European power market integration – an approach to welfare oriented evaluation*, 2011, S. 88ff

- increase of base risks for 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.

These costs are certain to be incurred to all market participants. They will be covered by the end consumer, who will face higher electricity prices.

In relation to these costs and highly questionable benefits of bidding zone reconfiguration any serious splitting proposals should be reconsidered.

BDEW would also like to point out to stakeholders, especially those TSOS that are owned by public governments and the regulatory authorities, that splitting will incur a major political cost. In light of the German history, BDEW does see a major political cost, if a European network code process advises market splitting. Price differences would especially affect generation and consumption and are very likely to lead to political interventions.

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?

Most important factors that NRAs should consider are market relevant and system stability related. Hence, all actions which are deteriorating competition, transparency and market liquidity (short term markets, forward markets) will substantially harm all market participants. Further, it has to be ensured that congestion and loop flows can be relieved efficiently and effectively to provide utmost system stability. In this context the remedial actions should not have an impact on the power markets.

Furthermore, 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.

Link

http://www.acer.europa.eu/Official_documents/Public_consultations/Pages/PC_2013_E_04.a_spx

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