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**Market Design and
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Your letter	
Our ref.	
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Public consultation on the influence of existing bidding zones on electricity markets

Dear Christophe,

RWE Supply & Trading welcomes the opportunity given by ACER to comment on the above paper on bidding zones. This letter, and the response to the individual questions in the Annex, is provided on behalf of the whole RWE Group.

ENTSOE, ACER and individual national regulatory authorities must act in the interest of completing the internal market in electricity and cross-border trade when reviewing bidding zones. This is a consequence of the requirements set out in the Third Package and, in particular the key objectives of the Regulation 714/2009.

Efficient competition needs a liquid wholesale market with low transaction costs, a forward curve of at least 2-3 years and a high level of forward churn. Therefore bidding zones need to be large enough to include a sufficient number of buyers and sellers in order to support this level of liquidity. Market participants should be able to interact based on a common wholesale price in the zone. The same zone must be used for all timeframes including; forward, day-ahead, intraday and balancing markets in order to provide consistent incentives across time-frames.

Overall, existing price zones in the EU are too small. Regulators and system operators should consider merging small bidding zones. For example, Belgium and the Netherlands are already examining how to combine their zones. The Member States in other regions should follow suit. This should have priority over the potential splitting of existing zones which already have well-functioning wholesale markets, in particular the Germany/Austria zone which is the most liquid electricity market in Europe, if not the world.

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Network considerations are generally overstated: larger price zones can be operated effectively by TSOs with sufficient coordination. System operators already have extensive means of intervention, in particular cross-border re-dispatching, which can deal with potential network issues in maintaining large market areas. This is also true in the case of loop-flows which will always be present in a meshed system and can be dealt with through TSO cooperation without requiring reconfiguration of market areas. The example of Germany shows how four TSOs can work together closely to guarantee system security beyond one network.

Cost-benefit analysis needs to reflect the positive welfare impact of liquid markets: in particular the impact on competition and transaction costs needs to be specifically evaluated. The economic costs of measures like re-dispatch are rather insignificant compared to the consequences of smaller markets with lower liquidity, reduced hedging opportunities and less scope for competition and entry. It is crucial to consider forward market liquidity rather than merely assessing day-ahead markets.

Changes to bidding zones must be carefully managed: or the credibility and certainty of markets will be reduced. Forward contracts already run for three or more years on the basis of current bidding zones. Likewise, investors are making decisions about new investments, refurbishment or maintenance partially on the basis of existing zone configuration. Change to price zones will always be a major disruption to the market and abrupt changes to expectations should be avoided.

Yours sincerely,



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RESPONSE TO INDIVIDUAL 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?

Based on the CACM Framework Guideline, the choice between redefining zones, re-dispatching and network expansion should be based on the principle of overall market efficiency. With this in mind, the following points are relevant.

- The expansion of transmission capacity is the most efficient measure to remove structural congestion and loop flows.
- Until the network extension is completed, re-dispatch is the best temporary option and is currently the lowest cost way to resolve congestion,
- The economic costs of re-dispatch are not significant compared with the advantages of maintaining large bidding zones with high liquidity.
- Splitting existing bidding zones is not likely to be efficient.

It should be noted that coordinated re-dispatching would, in any case, result in a rather similar dispatch situation compared to the splitting of bidding zones without and social welfare loss.

With respect to loop flows, it is clear that these are mainly caused by the consequences of renewable support mechanisms in Germany and have little to do with configuration of bidding zones. In any case, loop flows can be dealt with efficiently though TSO cooperation. The "Virtual Phase Shifter" project between Germany and Poland is a good example for a successful initiative, which could be extended to Czech Republic. In the medium term, these problems will be solved by an extension of the German network which is already under way, and the likely reform of renewable support in Germany.

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?

RWE is not in a position to evaluate the overall European bidding zone configuration in detail. However, we can confirm that the economic welfare losses of re-dispatching are very small compared with the welfare gains from a large wholesale market for Germany/Austria. We know from first-hand experience that the German-Austrian market with its high liquidity is used by many foreign counterparties for hedging and its price has a guiding function in many less liquid markets.

Indeed the forward liquidity of the DE/AT wholesale market (as measured by churn) is probably one of the highest in the EU, if not the world. High levels of churn benefit consumers by making the generation and retail markets more competitive and by reducing transaction costs (bid-offer spreads). These benefits must be specifically taken into account in any decision on bidding zone configuration. We therefore do not believe that splitting the German-Austria bidding zone is a sensible solution, also against the backdrop of the significant implementation and transition costs for network operators, exchanges and market parties/suppliers.

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?

The effect of bidding zone configuration on the efficient use of transmission infrastructure is strongly overestimated. Our view is that TSOs are able to control cross-border flows by re-dispatching and technical network measures. In fact, the exactly **same** combination of power plants can be activated by market signals **or** re-dispatching orders, no matter how large the bidding zones. From the perspective of the system operator it does not make any difference whether the activation of power plants follows the market price signals based on small bidding zones or the re-dispatching orders of the system operators in a large zone. So the question of bidding zone size is largely irrelevant to the efficient use of interconnections.

Much more important is the need for TSOs to work together to react quickly to unexpected changes in, for example, solar and wind generation and to avoid critical conditions. However even these problems will be minimized once gate closure is set to H-1 and intraday markets are functioning properly.

Arrangements need to be in place for coordinated redispatch of both conventional and renewable generation units to ensure scheduled cross-border flows and deliver network security. It is therefore crucial that TSOs closely communicate and coordinate their operational measures. The existing regional cooperation initiatives on security coordination among TSOs should be improved and expanded to ensure efficient and safe cross-border flows in any situation. In addition, the European framework for cross-border re-dispatching (including the mechanism for cost-sharing) must be clarified. The current drafts for the Network Codes do not contain sufficiently detailed rules in this respect.

Large bidding zones do not necessarily cause higher uncertainty in capacity calculation, higher reliability margins and a reduction of cross-zonal capacity. TSOs should be able to forecast the actual flows in the network based on the extensive generation information they have on a nodal basis. Based on the CACM network code and on the requirements in REMIT and the Commission Transparency Regulation, more information will be available. As we understand it, the required models are already functional, independent from the configuration and size of the bidding zones.

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 issue of potential discrimination between internal cross border exchanges is not an issue specific to any particular bidding zone configuration. The main problem we see at present is that, at many borders, the capacity calculation method is not transparent and that (for example in CEE) there are sudden reductions in the amount of capacity offered, for reasons that are typically impossible to follow. Such incidents have occurred frequently regardless of whether bidding zones are large or small.

Discrimination issues also need to be tackled by concrete and harmonised requirements for capacity calculation and for firmness of transmission capacity. Network Codes should not allow every TSO to maintain their own unique capacity calculation method. And regulators must ensure that, at all borders, the maximum of firm capacity is available to commercial flows, preventing any case of discrimination from the very outset. Indeed, this is a key element of discrimination in that national transmission rights are usually firm, whereas cross-zonal rights are, as yet, not firm. This needs to change once the FCA code is in place.

Often it seems that some TSOs are reluctant to sell all capacity to the market, but prefer to keep idle capacity for general optimisation purposes, far beyond reasonable security margins. TSOs should therefore be subject to incentives to make available the highest amount of firm capacity between zones. Regulators should ensure that TSOs can recover all firmness costs. This would lead to a more balanced situation between national and cross border exchange.

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?

It is important to note that forward market liquidity is the key to effective competition. Liquid forward markets allow new entry from generators and suppliers and means that changes in position as a result of customer switching can be managed effectively. As a large part of the retail market is based around contracts of one year or more, the forward market is the main part of the wholesale market which facilitates competition. This is not to say that the day-ahead and intraday markets are not important. However their role is different in that they provide an opportunity for fine tuning of positions before gate closure.

In any case, a reduction of zone size will negatively affect liquidity across all timeframes, even in the presence of market-coupling. Smaller bidding zones be-

come relevant when the interconnectors are congested and markets split into two price zones. In this situation, each price zone has a lower liquidity, because offers from the other bidding zone are excluded. The potential of a market split negatively affects the market, because participants cannot expect full liquidity.

It is important to note that market parties with physical assets (generation or consumption) cannot choose in which bidding zone they become active in. They face an additional market risk because they do not know how often and when the market will split and how this will affect prices. This will reduce competition and increase the cost of entry or the execution of and cross zonal activity.

In addition, any forward transaction between bidding zones comes with a price risk. This risk means a disincentive for cross-zonal transactions, which will reduce overall forward market liquidity. Since the number of traded forward products will multiply, each product has only a fraction of the former liquidity.

Reducing zone size will have consequences for the retail market. Large bidding zones allow small retail companies (with local generation units) to cover the whole market. If markets are split up, there is a strong likelihood that these companies would decide to withdraw from the other bidding zone due the hedging risk. Otherwise they have in this other bidding zone a disadvantage compared with suppliers with generation units there, because they have to buy transmission rights or contracts for difference (which, in any case, are not always available).

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?

To provide efficient hedging opportunities is one of the most important functions of the electricity wholesale market. Unfortunately, there are few markets in Europe with adequate forward liquidity. The German-Austrian market is the most liquid one (with a churn rate of around 8 to 9 times the volume of total consumption) and a liquid forward curve of around three years.

While these market conditions are sufficient to cover basic hedging needs, even well-developed market like Netherlands and Great Britain fail to provide this level (churn rate only 3 to 4, a forward curve of only two years). Meanwhile the Nordic market only offers a liquid forward market for the overall system price, and contracts for differences to cover the individual bidding zones have very limited availability. Other markets have a limited liquid forward market of up to a year.

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?

Bidding zones should not be defined with the purpose to provide for price signals. This will not deliver adequate results for a number of reasons.

- Firstly, even with perfectly designed zones, congestion income only shows the current situation. Smaller zones will inevitably have a limited forward curve, and as a result the prices at the wholesale market will be an insufficient basis for the long-term decisions for investment in either the network, or production/consumption.
- Secondly transmission investment, in particular, is usually the result of regulatory decision making rather than market prices. Even where “merchant” interconnectors have been built, this has usually involved a high level of regulatory involvement. Even for DC interconnectors, the most recent indications seem to be that, in future, pure merchant projects are unlikely and will be replaced by a cap and floor approach.
- Most generation/consumptions investments result from longer term evaluations of the supply/demand situation and negotiations with equipment manufacturers as well as consideration of government incentives (locational or otherwise). The consideration of prices is only a part of the picture and even then, forward prices are the most relevant consideration, not spot prices.

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?

It is important to include market parties in the discussion on the methodology for applying the rules of the network at an early stage. It clearly insufficient to consult the market, on the application of a methodology defined by the project, without input from other stakeholders.

ENTSO-E project should clarify the details left open in the draft CACM Network Code on how to assess alternative bidding zone configurations:

- The project should stipulate that it will perform an overall market efficiency assessment taking into account **all criteria** relevant to assess the efficiency, **including** the criterion of “**expected network costs**” (including possible remedial actions).
- It is necessary that the project provides for a concrete methodology for the cost-benefit analysis in which **all expected welfare effects** for a changed delimitation **are quantified** (in Euro). There must be clear rules how the criteria from the draft Network Code will be **evaluated**.
- The full assessment must be done for the **existing grid** configuration as well as every **alternative configuration** taken into account.

- The project should clarify that **network security** will be assessed based on the assumption that **all efficient network measures** (remedial actions) will be taken.

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?

See introduction above. In summary, the two most important factors currently not fully taken into account are the **economic benefits of larger zones** and the **overestimation of welfare loss caused by re-dispatching**. In addition, there is **no sufficient framework** for the overall market efficiency analysis.