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E.ON Position on

ACER's pre-consultation on "Energy Regulation: A bridge to 2025"

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17 December 2013 1/11



1 General Remarks

E.ON welcomes the pre-consultation by ACER on the challenges the European energy Market will face after 2025. However, all efforts and resources should now focus on the fast implementation of the third package and the implementation of the electricity and gas target model before introducing new market rules for the challenges beyond 2025. The current main issues are aside of harmonized market rules and products the fast growing share of renewables and their impacts on the electricity wholesale market, the profitability of thermal plants, the security of supply of the electricity market and their impact on the gas infrastructure. Within in an unbundled market system the issue if security of supply in the electricity and gas market remains unsolved. Renewables leaving their market niche and becoming a dominant element in the market must react upon market signals. National energy policies should be aligned and the EU ETS be enforced enabling a price signal to reach the climate objective without distorting the market.

We would like to comment on the published papers in more detail.

2 Specific Remarks

The Overarching Paper

Question 1: Do you agree with this overall approach? Would your emphasis be any different?

E.ON agrees that ACER's core activities in cooperation with the NRAs should be in the implementation of the third package and the corresponding network codes. Although the deadline for achieving the single market is approaching, a lot of issues are delayed and well behind the time schedule. Stronger emphasis on the timely realization of the electricity target model is required as well as a more distinctive elaboration of market rules within the network codes instead of postponing the debate.

Instead of triggering different points of discussion ACER and the NRAs should focus their resources to the current open issues first to ensure that the Single European market is achieved in a timely manner. The liberalized and integrated markets should then take effect and let consumers benefit from that. It becomes difficult to discuss about regulatory barriers for new market entrants before knowing how the market will evolve and if these barriers will still be in place. However, E.ON agrees that the electricity and gas target model should continuously be checked against the political and economic context.

The mains issues as described in the paper are dependent on national and European political decisions. Therefore, ACER's and NRA's role should be to give advice within the decision process to ensure consistency with the European integration process. There is still large influence by NRAs on ACER's activities via the Board of Regulators and personal secondments. A stronger intervention to ensure well and clearly defined harmonized market rules would be preferable from our point of view.

The two main challenges in the electricity market will be the future design of the wholesale market including a possible capacity mechanism and a renewable support scheme potentially reducing

17 December 2013 2/11



market distortions. Both issues will have a tremendous effect on the future market but have to be decided on the political basis.

Question 2: Do you agree with this broad analysis and/or do you have further suggestions?

As identified in paper the further market integration of renewables and the necessary introduction of capacity mechanisms are the key challenges. The increasing share of intermittent renewables will require a more flexible generation portfolio and back-up capacity. E.ON believes that demand response will be important for security of supply, but the future contribution of active domestic customers to security of supply cannot be estimated to this point of time and will keep being challenging to achieve. The main potential is on the industrial process and cooling and heating system. The introduction of a well-designed capacity mechanism will trigger investments in demand response. Independently on further decisions regulated and non-regulated business should continue to be clearly separated on the basis of unbundling requirements. An issue which might be amended is the future roles regarding the responsibility of security of supply in the gas and electricity market. Also the revitalization of the EU ETS as the true European and market-based instrument to steer the decarbonization is not mentioned in the paper.

Question 3: Do you think the list of suggested measures is complete or do you have further suggestions?

• Do you think that the requirements for infrastructure investment in gas are the same as in electricity?

The gas and electricity infrastructure face different challenges: The focus of electricity infrastructure is about optimization and the development of interconnection capacity as, except from extreme cases, nearly each Member States is able to produce the electricity required within domestic sources. On contrary, the gas infrastructure is largely dependent on imports. Therefore a pure economic optimization will not be sufficient.

Additionally, the electricity infrastructure faces significant investments to connect the increasing share of decentralized renewable facilities, to transport the produced electricity to places of demand and to cope with massive electricity during times of high renewable in-feeding across borders. This also changes the role of electricity distribution grids which may have to function in both directions and have to find economic solutions for rare times with extreme renewable in-feeding.

Due to the growing share of electricity production from renewable energy sources the gas infrastructure is confronted with growing flexibility. This will lead to less operated gas-fired power generation in the future and have also impacts on the profitability of other gas infrastructures (e.g. underground storage facilities). These are necessary for the delivery of fuel to the power plants concerned at peak times. Furthermore, the competitiveness of natural gas maybe reduced by the increased costs of infrastructure to be carried by other gas end-users due to the reduced consumption by gas-fired thermal plants.

17 December 2013 3/11



What further ideas do you have on the future role of consumers?

Already now and increasingly important in the future, some consumers will play a more active role as market participants, e.g. via smart appliances, auto generation or as owners of storage facilities. To achieve, the economic most efficient approach, it will be decisive not to answer existing distortions with new distortions – but to get rid and phase out existing distortions to the market. This will finally lead to a situation, where the consumers will be enabled to choose their preferred energy solution.

Some consumers will certainly be more active in their new role than others: consumers with a comparatively high energy demand will certainly look more into tailor-made solutions than most household customers. Consumers with a specific interest in their energy mix are certainly more aware of the possible technological solutions than others. In order to find the right solution for every customer, the freedom of the customer to choose should be strengthened.

However, the preferences of end consumers will differ regarding their activity level in the market. Therefore, all measures introduced to increase the active role of the end consumer should be voluntary.

Consumers and Distribution Networks

C1. Do you think that further European level measures should be taken to enhance the operation of retail markets to the benefit of consumers?

With the third package enough European level measures are present, however, European authorities should take care that these measures are properly implemented nationally. As an important example for this, regulated prices have to be removed. With regards to new technologies, standardization will certainly help – but this is already done to a large extent by the market participants.

C2. Can you suggest ways in which we could enhance the voice of consumers in the development of Europe's energy market?

There are many very specific types of consumers in the market; hence it should be clear, that it is not "the voice", but "the voices" of consumers. Large, industrial consumers have a say via their associations, some (certainly not all) household consumers will find some alignment of their ideas with the voice of consumer watchdogs. To enhance these voices some kind of round table might be established (in person or on a virtual base, using modern internet technologies). In this context the London Forum plays a decisive role. These round tables might reveal the various interests of all consumer groups and a good start to identify common interests.

17 December 2013 4/11



C3. What are the main questions that you consider the proposed CEER review should address with regard to the future role of DSOs and also to ensure that the regulation of distribution networks remains fit for purpose in 2025?

Since the transformation of the European and national energy systems will involve new roles of consumers and producers, also the role of DSO has to be further refined. The increasing dynamics in distribution grids with distributed generations from fluctuating resources or from CHP units steered by heat demand and with the deployment of demand response will require new processes for operations of the grids and for investment decisions, where e.g. grid expansions have to be valued against the use of demand side flexibility products. Here a clear signal by the regulators is needed, that all (also in the long run) necessary R&D costs, investments and operational costs will be reflected properly in the tariff structures.

Electricity:

E1. Although adequacy issues are not likely to disappear completely, do you agree that the current primary focus on levels of adequacy will likely be expanded to emphasise a later priority focus on flexibility?

The focus today is already on generation adequacy and flexibility. With an increasing share of renewables the demand for all sorts of flexible options (regardless if provided by generation, demand response or storage and differentiated by when and how fast they are available and by the duration of the offered load change) will grow. ENTSO-E should therefore also monitor the availability of flexibility and its costs and benefits. This does however not mean that the focus will change from pure adequacy issues now to pure flexibility focus in later years. The generation mix portfolio and the design and the functioning of the balancing markets might be an issue to monitor by ACER as preventing recurring blackouts is a real time issue. Thus any assessment should transparently show the amount of balancing reserves contracted by the TSOs, and on how these resources are used.

E2. Should we seek to further define, measure and develop flexibility in addition to the initiatives that are underway? If so, how could this best be done and in which market time periods?

The day ahead, intraday and balancing market should deliver the needed price signals for flexibility. Therefore, no additional market scheme is necessary to reward flexibility. The choice of the best compatible technology should be left to the market. Some pre-requisites are however needed. First, there must not be any regulated prices. Second, data availability to the relevant market player must be assured, and third, demand must have the technical and commercial possibility to react on prices. Potential regulatory barriers especially for small-scale generators or aggregation should be removed. Furthermore, storage solutions should be relieved from grid tariffs, charges and/or taxes associated with generation and consumption as they only defer or convert energy for future use. It is important that storages remain being part of the competitive market to ensure competition on a level playing

17 December 2013 5/11



field. Also DSOs should have the options under certain conditions to tender for flexibility services instead of extending the grid to last kWh.

E3. What are the market-based routes for flexible 'tools' to participate?

See answer to E2

E4. What measures may be required to ensure that the market receives the most appropriate signal for the value of flexibility?

As stated in E2 fully liberalized and competitive wholesale markets are required. This includes the intraday and the balancing market and clear harmonized implementation of the CACM and Balancing Network Codes. Additionally, end consumer have to have the technical option via an appropriate metering and control devices and the commercial opportunity, e.g. via specific tariffs, to react to market prices or grid/congestion management offerings.

E5. Do you think that other, for example institutional arrangements should be considered? Is greater TSO and DSO coordination required? If so, what should NRAs do to facilitate this?

Keeping the balance between production and demand in the European Power System and maintaining frequency in the predefined ranges, the so called "System Management", is the task of the TSOs. DSOs have a supportive role: in normal status of operation by delivering the defined set of information on status in their grids and in emergency situations they are obliged by national rules to support the TSO with disconnection of load in a predefined system. DSOs may also be obliged to support the TSO's congestion management e.g. by adjusting distributed generation on their demand ("Feed-in management"). TSOs have to report to the DSOs on existing flexibility contracts in respective distribution grid area. Any interference of TSOs with DSO grid operation and the flows of operation have to be strictly defined and based on regulation and/ or contractual agreements.

DSOs may use offered flexibility sources by the market to avoid investments in network development and enforcements. Prerequisite to that DSOs buy necessary services usually from commercial operators, where it is cost effective compared to network upgrade, or as an interim solution until upgrading has occurred.

As the complexity of the grid increases with the decentralized generation, information exchange between TSOs and DSOs in both directions can be improved.

E6. How should regulators facilitate demand side participation (including demand side response and electricity storage)?

Regulators should ensure that potential regulatory barriers are removed so that consumers offering demand side response or aggregators can benefit from liberalized and integrated balancing, day ahead, intraday markets and possible capacity markets on equal footing with generation or storage operators. Availability and non-discriminatory access to all relevant data for the grid management as

17 December 2013 6/11



well as for market participation has to be assured. For demand site participation, clear roles should be ensured and unnecessary complexity should be avoided. The introduction of a capacity mechanism may be decisive to trigger investments in the demand responsiveness by end consumers. The existing logic for energy and balancing settlement shall remain unchanged. Grid operators should build up settlement processes for grid management services that are consistent with existing processes.

E7. How can NRAs support, or incentivise TSOs and DSOs to invest in 'smart networks'. What actions are needed, in particular from regulators, to promote more active distribution networks? Do we sufficiently reward avoiding 'dumb' investments?

First of all, not all grids have to become 'smart' in the future. Pure copper will still be necessary in the future. It has to be analyzed case-by-case how 'smart' the part of the grid has to be to avoid unnecessary costs for end consumers, i.e. a cost-benefit-analysis is always key for those investment decisions. Secondly, the grids on the TSO level are already 'smart' and do not have further be considered. NRAs should set appropriate incentive to invest in 'smart grid'. Today, NRAs hamper the research and development as well as the investment by not acknowledging the initially higher costs compared to conventional grids, which may be rewarded later by future lower investments in grid expansions or more efficient operations.

E8. How should NRAs influence the competition debate, for example on support schemes, regulated tariffs, capacity remuneration mechanisms, etc?

The NRA should monitor the issues and remove possible identified regulatory market barriers as soon as possible. NRAs should ensure that grid operators facilitate all market actors to do their business on a level playing field. They should not influence political decisions.

E9. To what extent should the relationship between competition in electricity and gas markets influence regulators' activities? Could regulatory action on the gas market, help solving the flexibility problem of the electricity market?

The decreasing operational hours of gas-fired power plants increase the costs of infrastructures to be carried by other gas end-users, therefore reducing the competitiveness of natural gas. Additionally, the increasing uncertainty on the future electricity market design delays investments in gas infrastructure. Regulatory actions should avoid restrictions on gas plant offers and where restrictive practices apply to the gas market regulatory measures should aim at removing these restrictions. E.g. there should not be rules in the gas market which prevent generators from maximizing this flexibility, unless these are in some way justified. For example are there any renomination lead-times on the gas system which are not justified from a technical point of view, yet limit the offering of flexible generation from power stations. Of course any measures here would need a careful consideration of the TSO's capability within each system, as this is likely to vary across different systems. Another field of action may be the use of Power to Gas: It has to be ensured, that this "indirect" power storage is not subjected to disadvantages against conventional solutions.

17 December 2013 7/11



E10. How should regulators remove barriers to entry for new supply sources?

There is no further action by ACER or NRAs required. They should continue to remove potential regulatory barriers and strictly monitor the network development.

E11. What actions, identified in these papers, should regulators prioritise?

ACER and NRAs should focus on the implementation of the third package and the network codes. More integrated day ahead, intraday and balancing markets and the removal of regulated prices are crucial to achieve the objective of a Single European Energy Market. Therefore, ACER should prioritize their resources to the development of precise Network Codes to gain the benefits from integrated markets.

Gas

G1. Do stakeholders agree with our view of the gas specific strategic context and in particular with our views on:

- Declining demand for gas, and in which sectors such decline is seen;
- Increasing role of imported gas and uncertainty surrounding unconventional gas supplies in Europe; and
- Increasing role for a flexible gas supply to support growth of renewable electricity generation.

We see more uncertainties in the market outlook and recommend leaving open the possibility of different outcomes. We strongly support the increasing role for a flexible gas supply to support renewables. A reasonable diversification of gas supplies is still vital in view of imported gas volumes. We do not see that unconventional gas will be a game changer for Europe, although this kind of resource should be dealt with in a constructive way in line with a clear protection of the environment.

G2. Are concerns about competition in gas markets and concerns that liquidity at most hubs is insufficient to achieve functioning wholesale markets sufficient to warrant some form of intervention?

We support more progress for the implementation of the current Network Codes (NC) and Framework Guidelines (FG). NRAs should observe the spirit of the rules in early implementation and when rules are in place. Where necessary they should be amended in consultation with all stakeholders. After the implementation of the first four NCs it would probably benefit gas market integration best if regulators, including ACER and the EU Commission, would rather focus on compliance with existing regulation than on creating new regulation.

17 December 2013 8/11



G3. Should increased market integration be sought to address issues of non-competitive markets and a lack of liquidity? Are there other more effective measures to be sought in this respect?

We share the target of increased market integration on a cost-efficient basis. We already see that the liquidity of the European Gas Market have improved considerably, which should be further facilitated in all parts of the European Union.

G4. Would efficient use of existing infrastructure and the building of efficient new infrastructure facilitate competition between gas producers?

No answer

G5. Can upstream competition be improved with physical infrastructure redundancy or is it an issue of market structure (oligopoly)?

The number of upstream suppliers is increasing, and depending on the future of unconventional resources could evolve very differently from today. The capacity needs to be in place to meet these future supply patterns.

Regarding the development of physical infrastructure, it has to be taken into consideration that due to the strong decline in indigenous European gas production the import routes will quite likely have to be extended to connect the European markets with gas sources outside the European Union; the development of the Southern Gas Corridor is a good example for this.

Investments in these new or extended import corridors will face challenges quite different from the challenges for the development of gas infrastructure inside Europe. Due to the long transport distances of some thousand kilometers these investments are more cost-intensive than typical grid extensions inside Europe, the infrastructure is constructed and operated potentially under a different regulatory regime than the European one; traditionally only consortia of gas producers and import companies take the risk of these investments. Due to this risk profile it has to be evaluated, how long-term stable investment conditions incl. long-term entry capacity into markets and exemptions from particular regulations from the 3rd energy package can be provided.

As a result, to some extent the development of competition between gas producers will go along with the development of new import corridors into the European Union. Therefore, redundancy is in general an important criteria for competition. In order to minimize inefficiencies regulation has to find a compromise between stable investment conditions for large infrastructures and efficient use of them.

G6. Should regulatory incentives be placed on TSOs to improve the efficient use of existing gas infrastructure?

All market participants have a role in optimizing the use of existing gas infrastructure and TSOs in their business outlook will benefit, in so far as more efficient market signals will follow. Thus, we

17 December 2013 9/11



fully support the efficient use of existing infrastructure and the development of structures including closer cooperation between TSO's that allow TSOs to optimize the efficient utilization of the existing infrastructure. Giving right monetary incentives, for example within the boundaries of overbooking and buy-back mechanisms, certainly helps fostering the efficient utilization of the existing gas infrastructure.

G7. What are your views on the future investment climate for new gas infrastructure in Europe? What are the major challenges ahead?

The actual change of the energy market is a major challenge for the market. We have to ensure, that the regulatory regime enables the utilization of existing and necessary infrastructure in the market, before considering new investments.

Resulting from the actual changes in the markets, an increasing amount of risk is shifted towards the infrastructure investors. These risks might be addressed and compensated by a more stable regulatory framework, sufficient return on capital and long-term exemptions, where needed in order to allow infrastructure investors also to take external effects into consideration.

The uncertainty on the future electricity market design also delays investments in gas infrastructure. Similar to the electricity sector will the market not deliver the required amount of transport and storage capacity than needed to ensure security of supply. There needs to be a market design mechanism that ensures sufficient gas storage levels to ensure security of supply.

G8. Should regulatory frameworks recognise externalities in order to improve investment decision making?

We see a need to cover supply security matters in a cost efficient way and of course this means that a well estimated amount of redundancy would be reasonable.

G9. Are cross-border market zones or regional trading zones practical ways to integrate market zones?

We support merging balancing zones to their optimal size, where ever benefits outweigh costs.

The concept of trading zones is unclear. If they are explored, then the conditions need to be market driven, supported by the codes, and not imposed on a top-down basis.

In principle, the approach to define markets by zones encompassing >20 bcm/y is a reasonable approach. It should be the norm that such zones could be organized cross-country and not necessarily on national level. Such an approach would also foster cross country co-operation across borders.

17 December 2013 10/11



G10. Are there other ways one may envisage to enhance the liquidity of European markets?

Continuing improvement on hub operation, particularly the standardisation of balancing regimes can enhance liquidity. As a first step though, proper entry-exit zones must be established everywhere in the EU, where entry capacity bookings independently from exit capacity bookings (and vice versa) give access to a virtual trading point to balance inputs and offtakes. However, we believe this product should be offered in addition to the existing entry and exit capacity products, to increase, rather than limit, the flexibility of the EU gas market.

G11. What actions could be taken to further integrate market zones, given the uncertainty regarding costs and benefits of integrating market zones?

Integration of neighboring market (=balancing) zones or at least a closed cooperation with similar standards and procedures could be a way to further integrate the market. A first step would be within-day access to cross-border capacity which is paramount in order to balance portfolios across system borders.

Furthermore an obligation for storage transport tariffs (entry and exit) to a price below transmission to other network points would be reasonable.

G12. Does a lack of coordination between intra-day gas and electricity markets expose gas-fired generators to significant imbalance risks?

No answer

G13. Does the level of risk exposure create sufficient concern that it could hamper efficient market operation to warrant intervention?

No answer

G14. How should coordination of intra-day / balancing gas and electricity markets be improved?

The harmonization of the gas and electricity day can improve the operation of gas-fired plants.

G15. What concrete possibilities for demand response in gas do you envisage?

No answer

17 December 2013 11/11