

Response

To the Consultation Paper on generation adequacy, ca- pacity mechanisms and the internal market in electricity

Public consultation
of the European Commission

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Introductory Remarks

BDEW warmly welcomes the consultation of the European Commission. There is a real danger that unilateral decisions taken by member states might jeopardize the completion of the internal market and might heavily impact competition on a national basis. At the same time conclusions drawn by member states might not fully reflect market distortions caused by national policy choices.

The character of the consultation, the remarks given in chapters 1-6 and the questions themselves suggest that the European Commission disposes of a very accurate picture of possible consequences of unilateral actions.

Bringing about a conducive investment climate while securing competition and reaping the benefits of the internal market, will not be an easy task. On the one hand it is too early to fully rely on European measures to guarantee security of supply. On the other hand some sort of European framework or measure sticks to cope with security of supply on a national or regional basis seems inevitable.

There is a certain danger that action on a European level comes too late to prevent members states from installing forms of capacity mechanisms that will negatively influence completion and the internal market. The European Commission should convince member states not to take any decision that is difficult to repeal before the decision on whether or not the European Commission will come forward with additional measures (see chapter 6) is taken. The full range of tools based on existing EU-law should be used to prevent such measures.

One shortcoming of the consultation has to be criticized. At least explicitly, out-of-market interventions to maintain reliability are not within the scope. This is not justified as negative impacts on the functioning of the market and even on long term security of supply may be as high as capacity mechanisms. For instance a ban on plant closures may deter investment as much as price caps. As a Brattle report on capacity mechanisms rightly states “... *While such out-of-market mechanisms often appear to be a low-cost solution to ensuring reliability compared with market-based options, the volume and cost of these mechanisms can increase quickly while simultaneously distorting market prices and reducing market efficiency and competition.*”¹

Questions

1. Do you consider that the current market prices prevent investments in needed generation capacity?

On the one hand, currently market prices are such that practically investments in new generation capacity do not occur. The downward trend of long term market signals recently has accelerated. Even more worryingly market exits might occur to an extent which could be unsustainable from a macro-economical point of view and with regard to security of supply.

¹ Brattle Group, A Comparison of PJM's RPM with Alternative Energy and Capacity Market Designs, 2009, p. 24

On the other hand, from a German generating perspective there is no need for additional generating capacity within the timeframe in which the market price could give relevant signals. It is very likely that a well functioning electricity market would be able to set the right price signals in the future when additional generating capacities are necessary. This implies that the necessary (high) price signals in situations with scarce capacities are allowed.

Even more importantly, investment decisions in generation facilities are mainly based on long-term expectations. The current prices of the spot or forward markets do only play a minor role in the investment decision. In contrast the following long-term expectations of the following issues are decisive:

- Market fundamentals (electricity, fuel, carbon prices and spreads)
- Conventional power plant portfolio: Commissioning and decommissioning of conventional power plants of market participants
- Share of RES, affecting the expected operation hours
- Political and regulatory framework (e.g. planned introduction of a capacity remuneration mechanism (CRM), long-term CO₂-targets and the development of the ETS carbon tax, arbitrary surtaxes on energy firms, must-runs, assumed support scheme for certain capacities (e.g. for RES, storages, Demand Response))

2. Do you consider that support (e.g. direct financial support, priority dispatch or special network fees) for specific energy sources (renewables, coal, nuclear) undermines investments needed to ensure generation adequacy? If yes, how and to what extent?

Any financial support for specific technologies or energy sources is exerting a distorting effect on the market. This is why BDEW has taken a critical view on subsidies impacting on wholesale and retail markets recently.²

Exceptions have to be made for research and development of new techniques. As long as financial support is limited in time and quantity there may be also a case for support for specific technologies if the beneficial environmental effect is proven and such techniques would not be developed in a pure market environment. This is applying in particular to renewables. If such support is granted the detrimental effect on the market has to be closely monitored. If it turns out that a given support scheme is foreclosing the market or endangering security of supply remedies should be taken in order to minimize such effects.

But here again, the uncoordinated use of support mechanism and changes in policy increases investor uncertainties.

² BDEW position paper Staatliche Zuwendungen im liberalisierten EU-Binnenmarkt, 27 June 2011

3. Do you consider that work on the establishment of cross-border day ahead, intraday and balancing markets will contribute to ensuring security of supply? Within what timeframe do you see this happening?

The further European integration of cross-border, day ahead, intraday and balancing markets allows an optimal use of infrastructure and an optimal dispatch of European generation assets and thereby lowering the overall need for generation capacity. In particular in the North-Western-Region significant efficiency gains could be achieved in the last years by Market Coupling. Also the volume coupling between CWE and the Northern region ensured that the flow was in most cases in the correct direction.

Day ahead market coupling especially in Central West Europe has lead to a step-change not only in terms of price convergence but also in the reduction of congested hours.

The German TSOs have to cooperatively manage their control areas through joint auctions and with coordinated requisition orders. This lead to a reduction of positive secondary and minutes reserve to be kept available. This in turn enabled the previously bound capacities to be used for the energy market. Recently, TSOs from Denmark, Czech Republic, the Netherlands and Switzerland joined in.

The effects are described in more detail in a study of ECOFYS carried out on behalf of BDEW in 2012.³

However, an optimization of assets does not guarantee that physical generation assets are available. Security of supply is mainly a matter of the availability of assets at the right moment (generation, grid but also demand participation) and less a matter of optimization tools: Having the assets available (and thus having the investments done) is the key requirement to ensure Security of Supply and Adequacy. Therefore, further market integration positively contributes to increase security of supply, but its effect is limited.

4. What additional steps, if any, should be taken at European level to ensure that internal market rules fully contribute to ensuring generation adequacy and security of supply?

There are quite a number of disincentives to investment to be found in member states. For instance wholesale market price caps (e.g. in Spain) or regulated end customer prices⁴ (e.g. in Italy) or quasi monopolistic market structures have a deterring effect on investment. The European Commission should carry on to enforce

³ ECOFYS, Necessity of Capacity Mechanisms, 2012

⁴ Regulated end customer prices are perceived by investors as an indicator of political interference which stifles investment.

- competition rules,
- state aid rules.

In particular these steps are seen as necessary:

- The European Commission should increase the pressure on Member States to remove existing distortions such as regulated end-user prices, restrictions or unnecessary regulatory requirements on plant operations, as well as price caps and floors should be removed to allow energy-only markets to have a chance to function properly.
- Regulatory interventions on the generation sectors such as fuel taxes, Robin Hood tax for energy companies etc should be avoided to ensure a European level playing field. Existing taxes and levies should be further harmonized. Sudden changes usually to the disadvantage of generators lead to higher risk premium for financing investments.
- Grid development to overcome national congestion and development of cross-border capacity should be incentivized.
- Further market integration in all timeframes should be encouraged.
- RES support schemes should be harmonized between the Member states and the distortive effects on the competitive market have to be reduced as much as possible. In this respect, it is also paramount for an attractive and appropriate investment climate to have already “now” a view on how RES support schemes will evolve post 2020 and how the binding CO₂ targets will be set accordingly in the decades post 2020. Moreover, both RES and CO₂ targets have to be better coordinated. In particular the promotion of renewables itself leads to a reduction of CO₂ emissions that is contemporarily envisaged with the ETS.

In addition the European Commission should take remedial action in respect of the ETS. BDEW has commented on what is needed in two recent position papers referring to long term goals⁵ and to backloading⁶.

- The market prices should encourage demand-side response and policy should promote the development of electricity smart appliances so that market-based changes in demand contribute to wholesale market spot price formation.
- As in all other markets free pricing should be accepted as factual price caps on the level of variable costs lead to insufficient return to cover fixed costs, especially for technology which is last in merit order. Higher prices in times of scarcity will be helpful to develop DSM and DSR.

⁵ BDEW position paper, Gestaltung der mittel- und langfristigen energie- und klimapolitischen Ziele der EU, October 2012

⁶ BDEW position paper, Vorschläge der EU-Kommission zur Revision des Versteigerungszeitplans im Emissionszertifikatehandel, October 2012

- The Commission should create acceptance for plant operators to enter the market freely but also to exit the market freely when plants are not longer profitable. This is essential to have confidence in the investment climate.
- (European) Energy policy and regulation has to provide stable framework conditions for a long term perspective, continuous and frequent modifications of energy policy and regulation are not able to provide a strong fundament for investment decisions.

The coordination of compatible product definitions and incentive structures in capacity mechanisms is important in order to minimize distortions on the European cross-border trade and ensure compatibility with the IEM objectives and functioning. European policy has to encourage Member States to further harmonize national market designs (for example further introduction of intraday markets) and to further intensify market coupling.

5. What additional steps could Member States take to support the effectiveness of the internal market in delivering generation adequacy?

Member states should

- Facilitate transmission grid extension. Coherent grid development and investment plans between member states and a stable regulatory framework with appropriate incentivisation for network facilities are vital in order to reduce the uncertainties in grid/generation investments
- engage in ongoing market coupling and balancing projects,
- favour the price responsiveness of demand by deploying the adequate tools and incentives for the different customer segments (B2B, B2C),
- move towards more market oriented ways of supporting renewables with the same obligations and rights as conventionals,
- phase out market distortions as described under 4.

Some members have introduced or shortly will introduce taxes on carbon. While this may positively influence investment climate on a national basis, the opposite is the case on an internal market level as the ETS-price level will be depressed even further thus disincentivising low carbon investment in other member states. Instead, member states should assist the European Commission in stabilizing the ETS.

6. How should public authorities reflect the preferences of consumers in relation to security of supply? How can they reflect preferences for lower standards on the part of some consumers?

Without any doubt in a medium term perspective flexible demand is one of the key answers to cope with security of supply. Nonetheless, with wholesale market prices at current levels and missing scarcity signals demand side response is unlikely to materialize

to a larger extent. Public authorities should make sure that wholesale prices are able to fully reflect price dynamics in periods of peak demand. Abolishing price regulation is necessary to incentivize price responsiveness of consumers.

In a medium to long term perspective there surely is a potential of household customers lowering their demand during periods of high wholesale market prices or stressed grids. It is less obvious that this potential will have a decisive impact on security of supply in a short term perspective. However, the following measures should be addressed by the European Commission:

- Abolishing price regulation (supply tariffs) that impedes incentives to demand to participate in the market;
- Favouring price responsiveness of demand at end customer level, allowing them to express their “willingness to pay”, by the development of intelligent grid infrastructure (smart devices and grids, but also smart appliances might need further development) as this would allow customers also to participate in short-term markets (day-ahead, intraday and even balancing markets);
- Integration of participation of demand side management in different markets (e.g. short term operating reserve managed by grid operators, participation in short term market, etc).

7. Do you consider that there is a need for review of how generation adequacy assessments are carried out in the internal market? In particular, is there a need for more in depth generation adequacy reviews at:

a. National Level

A purely national approach inevitably has to rely on some degree of overinvestment and will lead to a further loss of welfare. Therefore it is preferable that assessment tools and measures are developed on a regional or European level.

b. Regional Level

Efforts should be made to properly assess the issue of generation adequacy on a regional level. There is an urgent need to develop an in depth understanding to what extent and to which likelihood load peaks simultaneously do occur in all price zones involved. Synchronicities of actual load and available generation as well as the simultaneous available transmission capacity between and within market zones have thereby to be considered. On such a basis generation adequacy should be dealt with on a regional level whilst making sure that security of supply is guaranteed in all price zones without one-sided national privileges.

c. European Level

Already at present Regulation 714/2009 obliges ENTSO-E to adopt “a non binding communitywide ten-year network development plan, including a European generation adequacy outlook”. This has already been developed.

It would be helpful to develop some harmonized non-binding assessment tools and recommendations on acceptable levels of probability as to generation adequacy. And it should not be accepted on European level that national interests even for SoS lead to an encapsulation of the country involved thus leading to a disintegration of the single market

To sum it up: Yes, there is a need to review adequacy assessments in order to ensure that these are consistent with the need of a power system which is constantly influenced by new challenges. In general there is a need for changes of adequacy assessments on all geographical levels:

- Need to increase the transparency of used data (grid, generation assets, assumptions) in order to increase the understanding of the adequacy assessments achieved by the TSOs;
- Reviews in the past have considered demand as an exogenous element while demand response should be considered as an active contributor to supply/demand adequacy via its possible price responsiveness.

Supply/demand adequacy reviews should also integrate downwards regulation issues (incompressible generation capacity) what is expected to occur more frequently in the future, as well as operational flexibility (need for increased ramp rates of the whole generation system).

8. Looking forward, is the generation adequacy outlook produced by ENTSO-E sufficiently detailed? In particular,

a. Is there a need for a regional or European assessment of the availability of flexible capacity?

As mentioned under 7 there is a need for a common approach, e.g. as peak load in different countries is usually at different points in time. This will lead to overall synergies and efficiency.

In terms of flexibility there is no signal (e.g. by high prices) that flexible generation is scarce. There is rather a high degree of substitution between different markets leading to an efficient allocation of generation for the best purpose. Besides, TSOs increase cooperation to interconnect control zones and by doing so equalize system volatility and demand for flexibility.

With respect to assessment of flexible capacity, an adequate consideration of the synchronicity of load and available generation and simultaneously available transmission capacity is crucial. Furthermore, the assessment has to rely on continuous time-series and not on selected points in time.

b. Are there other areas where this generation adequacy assessment should be made more detailed?

According to regulation 714/2009 ENTSO-E is obliged to elaborate a European

generation adequacy outlook. Furthermore the Network Codes on System Operation and Scheduling do require TSOs to report on short term adequacy. Therefore ENTSO-E is currently providing sufficient generation adequacy assessments meeting all relevant requirements.

However, we regard the following potential improvements for the ENTSO-E generation adequacy outlook as helpful:

- The assessment has still a too static approach and does not consider sufficiently the economic dynamics of generation assets (it considers “assets will be built”, either RES (due to sufficient support) or conventional (“has always been the case”)):
- The methodology should integrate an economic assessment:
 - in a liberalized environment generation assets can be decommissioned for economical reasons before their technical end of lifetime expectations;
 - there can be economical constraints to newly build generation capacity;
 - the methodology should also integrate power quality/system stability issues (e.g. needed assets for frequency control, reactive power delivery, etc.);
- The current assessment only verifies whether the global generation capacity is ensured with only limited consideration of the characteristics of the system flexibility. Continuous time-series covering sufficient time-periods and with adequate time resolutions to cover the fluctuating behaviour of load and renewable feed-in should therefore be considered. The outlook focuses on generation adequacy, considering a static demand, while focus should be put on integration of demand response in adequacy.
- The outlook seems too much an aggregation of different national analyses with rather limited cross-border analysis: more focus should be put on a multi-national approach.
- It seems to be essential to analyze extreme situations, e.g. extraordinary low temperatures in the whole of Europe, and understand impact as well as incident rate for an internationally agreed dimensioning.

9. Do you consider the Electricity Security of Supply Directive to be adequate? If it should be revised, on which points?

The Electricity Security of Supply Directive has been driven by the assumption that state intervention and/or capacity mechanisms are the best answers on security of supply issues. Even if the draft-clauses based on such assumptions have not been enacted the Directive does not seem an adequate framework to deal with the issue as it is understood nowadays. BDEW rather suggests to repeal the directive and to replace it

by a framework directive that better reflects the understanding which forms the basis of the current consultation.

It has to be ensured that measures taken to guarantee security of supply are non-discriminatory and do not impose any unacceptable burden on market participants. A revision of the directive should consider a better elaborated definition of measures that do not distort the competitive energy market.

10. Would you support the introduction of mandatory risk assessments or generation adequacy plans at national and regional level similar to those required under the Gas Security of Supply Regulation?

Due to the “local generation” feature of power, the electricity sector is quite different from the gas-sector, where most of the energy has to be “imported” from outside the EU.

Many provisions in the Gas security directive related to supply/demand adequacy are already or will be integrated in the network codes Operational Security, or in the CACM code.

Risk assessment rules have an added value in supply/demand adequacy determination, however double use/work should be avoided with the work done under TYNDP and existing adequacy analysis.

11. Should generation adequacy standards be harmonised across the EU? What should be that standard or how could it be developed taking into account potentially diverging preference regarding security of supply?

Standardization is essential in view of common energy markets. There should be a common instrument to evaluate generation adequacy in an interconnected system. It could be measured according to the loss of load expectation (LOLE) concept.

12. Do you consider that capacity mechanisms should be introduced only if and when steps to improve market functioning are clearly insufficient?

In a perfect internal market CRMs should only be introduced if regional (supranational) SoS is endangered.

At least until 2020 – apart from the introduction of a strategic reserve – there seems to be no need for a capacity mechanism in continental Europe. This may depend on the share of intermittent renewable generation.

Capacity mechanisms should not be introduced in case they strongly contribute to market distortions. The risk of market distortion through the implementation of a CRM is lowest if the CRM is introduced at least on a regional (e.g. CWE) level. For the time being the internal market is not completed and a large number of distorting regulations ex-

ist between the Member states. Further there is no lack of generating capacity on a European level and the discussion on a best practice for CRM is still ongoing. Therefore we regard a strategic reserve as a better contribution to the needed system security which both does not affect the market by introducing any kind of distortion and being a short term and reversible measure.

13. Under what circumstances would you consider market functioning to be insufficient:

a. to ensure that new flexible resources are delivered?

Flexible resources should in principal come to the market due to high peak prices for few hours only. This volatility incentivizes flexibility.

b. to ensure sufficient capacity is available to meet demand on the system at times of highest system stress?

Even though there is no evidence that undistorted energy only markets do not perform, under less ideal circumstances capacity mechanisms may be seen as a way to secure security of supply during phases of peak demand. High peak prices are sending investment signals but since they are going to occur more and more randomly due to a higher share of intermittent RES the risk for investors is growing and might lead to too little and too late investment.

14. In relation to strategic reserves:

• Do you consider that the introduction of a strategic reserve can support the transition from a fossil fuel based electricity system or during a nuclear phase out?

Yes. The introduction of a strategic reserve based on capacities that would otherwise disappear from the market can help to secure sufficient generation capacity.⁷

• What risks, if any, to effective competition and the functioning of the internal market do you consider being associated with the introduction of strategic reserves?

Due to low impact on investment decisions and market prices there are no risks to effective competition and the functioning of the internal market introducing strategic reserve if it is guaranteed that the relevant capacities

- are placed outside the market,
- are only used in situations without market clearing or in situations with problems regarding the system stability,

⁷ For more details: BDEW discussion paper, Strategic Reserve –Safeguarding of the Energy Only Market, September 2012

- and when the strategic reserve bids with maximum price.

15. In relation to capacity markets and/or payments:

- a. **Which models of capacity market and/or payments do you consider to be most and least distortionary and most compatible with the effective competition and the functioning of the internal market, and why?**

The only capacity market (except strategic reserve) which doesn't distort the market is a European or at least regional one with a unit price for reliable capacity.

Important Design features of this capacity market are:

- I. National capacity mechanisms should not influence the wholesale electricity prices (e.g. the strategic reserve).
- II. Regional capacity markets which have an impact on electricity prices should be introduced in a coordinated way in all respective member states.
- III. **Competition and efficiency:** The required capacity and demand reduction should be procured in a competitive procedure (e.g. a capacity auction) to ensure least cost provision of capacity.
- IV. **Simplicity:** Two criteria should be relevant for the auction result: Availability in times of scarcity and the capacity price bid. More criteria hamper efficient results. Simple auction rules also strengthen competition between technologies.
- V. **No discrimination:** a single price auction for the whole required capacity would guarantee an efficient auction result. Every megawatt which is available in times of scarcity is important for the reliability of electricity supply. Such an approach would also support simplicity as well as competitiveness and efficiency.

There are a number of reasons for a single price auction:

- A non-discriminatory approach is effective with respect to the overall security-of-supply target. All relevant capacity is addressed and remunerated. In contrast, a capacity market for just a subset of capacity cannot guarantee to meet the target. If for example only new plants are remunerated, new plants will crowd out old plants to an unknown extent. The achievement of the capacity target would be a fortunate coincidence, an over- or undershoot is much more likely.
- A non-discriminatory approach is efficient. The defined security-of-supply target is reached by least economic costs. If just a subset of capacity is addressed, the market is distorted heavily. This subset is making better off compared to all other capacity. If for example only new plants are re-

munerated, the crowding-out of cheap old plants by expensive new ones leads to unnecessary additional economic costs.

- The same is true if separated sub-capacity markets are introduced, one for existing plants with an administered price and one for new plants. If the administered price is too low, a greater part of existing plants will be decommissioned. This endangers on the one hand the overall capacity target (is ineffective). On the other hand, more expensive new power plants have to be attracted to fill the growing gap. This leads again to unnecessary additional costs (is inefficient). If the administered price is too high, uneconomic old capacity stays on-line. There is a danger to overshoot the target. Again, economic costs are increasing.

VI. Stability: The design of the capacity mechanism has to be stable and not object to running and unforeseeable modifications.

As to capacity payments:

Capacity payments are unable to secure that the quantity of generation assets needed is really brought to the market / kept in the market. There is a likelihood for stranded investments. Capacity payments which focus on new built / modernization (as it is the case for Spain), are most critical. Such a design is pushing existing installations out of the market and is leading to an economically inefficient generation park.

To conclude, capacity payments are not an adequate instrument to guarantee sufficient generation capacity and security of supply.

As to the concept of the “focused capacity market”⁸:

The model enduces a double slippery slope effect: Funding a limit amount of installations which take part in the Energy Only Market (below 2000 operating hours) exerts pressure on other existing installations to leave the market. Additional pressure results from payments to new installations. In macro-economic terms this will lead to an inefficient generation park. Thus, further state interventions will be needed, which in turn will lead to further deteriorate investment climate.

- b. **Which models of capacity market and /or payments do you consider to be most compatible with ensuring flexibility in a low carbon electricity system?**

The focus of capacity mechanisms should lie on securing sufficient capacity. The most efficient way to ensure enough flexibility of generation assets is to send clear price signals to all generators. Therefore all regulation of wholesale prices (price caps etc.) are to be regarded as counterproductive. A well designed energy market will offer appropriate incentives to invest in flexible capacities. Therefore criteria on flexibility should not be integrated in a CRM.

⁸ Study delivered by Öko-Institut and others, Berlin 2012

c. Are there any models of capacity mechanism the introduction of which would be irreversible, or reversible only with great difficulty?

It is not the mechanism itself that should be reversible, but the CRM value/payment. As capacity mechanisms will only be effective when investors can rely on payments for a long period, reversibility is feasible but will take some time. Dependent on the definition of capacity products there might be a heritage for 10 years or even longer to pay for capacity.

16. Which models of capacity mechanisms do you consider to have the least impact on costs for final consumers?

With respect to mechanisms currently discussed BDEW considers a strategic reserve to cause the least cost impact. Consentec expects, for instance, that the extra costs for a strategic reserve of 4 GW for Germany with fixed costs of 35,000 €/MW per year will amount to approximately 140 million € per year⁹. ECOFYS considers in a study commissioned by the German Federal Environmental Agency (UBA) that the additional costs for electricity customers will be less than 0.1 ct/kWh. The exact costs depend on the result of the award procedure.

Independently of a specific CRM model (since their costs are very difficult to compare due to their dependence on a lot of parameters) a regional mechanism (e.g. CWE) will be normally less costly than a national CRM because it allows a better optimisation of the regional system (whereas it already considers the impact of grid constraints). Moreover, it avoids distortions between national markets.

17. To what extent do you consider capacity mechanisms could build on balancing market regimes to encourage flexibility in all its forms?

Balancing addresses real time issues. CRM relate to “longer” term market issues.

A well implemented CRM should be considered as a complement to the energy only market, including the day ahead market, intraday market and balancing market. A CRM should only remunerate the availability of the plant, not its energy output. The investor himself will take an appropriate investment decision in order to optimize his income for all market segments.

In any case one should avoid to impose capacity which is remunerated within a CRM to participate obligatory to the balancing market, because this would lead to must run obligations due to technical requirements (minimum plant production, ramp up/ramp down

⁹ For comparative purposes: The construction and maintenance of new modern gas turbine capacity in open cycle operation requires investments of about 400 €/kW; contingency costs from depreciation, financing, work-force, maintenance, contractual gas provision, etc. amount to 60-70 €/(kW a), i.e. to 250-300 million €/a for 4 GW.

constraints) and, as a consequence, to further distortion of the EOM. (E.g. a plant that has to offer on the balancing market, often must already run for technical reasons, meaning that the plant is producing (even if it is out of the money) and, accordingly, is affecting the energy market price in the day ahead market (with lower energy prices as a consequence).

18. Should the Commission set out to provide the blueprint for an EU-wide capacity mechanism?

At least not at the moment. First, it is too early to assume that energy only markets have failed. Second, more experience has to be gained on the proper interaction between market zones within the EU. But third, the EU should set out detailed criteria that prevent member states to adopt and introduce incompatible mechanisms (see answer to question 19).

19. Do you consider that the European Commission should develop detailed criteria to assess the compatibility of capacity mechanisms with the internal energy market?

Yes. This would be of great help.

20. Do you consider the detailed criteria set out above to be appropriate?

On the whole the set of criteria given in the consultation document seems to be very appropriate to deal with capacity mechanisms.

Whilst it is essential that the ongoing necessity of capacity mechanisms is closely monitored and subject to review the application of such mechanisms can be limited other than by duration. They may for instance be conditioned.

A differentiation should be made depending on the duration for what the capacity mechanism is introduced. E.g. capacity mechanisms introduced for a short and medium term duration should not be turned down because in a longer perspective increased interconnection and in particular the completion of identified projects of Common interest may bring about security of supply on a regional basis.

a. Should any criteria be added to this list?

Yes. The implementation of a capacity mechanism should not be an instrument to compensate for a disadvantageous and not competitive design of the overall energy market and energy policy that is not market oriented. In particular, renewables have to be better integrated into the market by abolishing guaranteed prices and feed-in privilege as currently set in place in Germany. Before assessing the need for capacity mechanism, these reasons of further market distortions have to be removed as well.

b. Which, if any, criteria should be given most weight?

Most weight should be given to criteria 1, 5 and 6. Further we consider the following criteria as the most important:

- Offer an attractive, stable and predictable political/regulatory framework, fostering investment confidence;
- Ensure long term revenue stability for generators (stable and predictable source of revenues during sufficiently long contract period) in order to guarantee a fair remuneration of investments in an industry characterized by boom and bust cycles with an increasing share of intermittent RES generation (need for standby capacity) and decreasing (residual) electricity demand;
- Coordinate/harmonize between highly interconnected countries and regions;
- Install a market wide system, including existing units.

Detailed comments on the criteria

1. *The necessity for a capacity mechanism should be clearly established in the context of:*

a. *The potential of the identified needs being met in the normal operation of the internal energy market, in particular:*

i. *increased interconnection and in particular the completion of identified projects of Common interest.*

Many important interconnection projects have been announced in the TEN-E regulation, only limited projects have been achieved so far. The Project of Common Interest (PCI) process proposed in the new Infrastructure package is an important improvement. However, during a transitory phase (awaiting the construction of these projects, and being aware that a full copper plate will engender excessive grid investments that would not be socio-economic justifiable), it will be necessary to keep some conventional generation plants on line, and therefore well implemented CRM would be the appropriate tool to support a cost efficient lifetime extension of those units.

ii. *steps to encourage effective competition by addressing the position of dominant undertakings.*

Well designed and well implemented CRM models have to include appropriate monitoring tools to mitigate potential uncompetitive behaviour in the CRM. Effective competition and market integrity should be ensured by existing regulation and legislation including REMIT. In a European integrated market the position of any player in a local market will be less relevant.

b. Alternative, less distortionary measures which could be taken, for example steps to improve energy efficiency or reduce electricity demand.

One should carefully distinguish between energy efficiency and demand response. The first one refers to the firmness of the capacity (a kind of “permanent” elimination of energy need, comparable to a new power plant that could “permanently” deliver energy), while demand response refers to the flexibility of the capacity (a short term reaction comparable to the availability of an open cycle to ramp up).

Energy efficiency and demand response are fundamental drivers for a sustainable power system because they lead to an optimal balance of the system in terms of social welfare. Therefore they must be promoted, whether a CRM is implemented or not.

Nevertheless, energy efficiency and demand response are not “alternatives” for a CRM because they may need to be complemented with CRM when they do not solve the structural problem of missing money for investments on their own neither in peak plants, nor in backup capacity needed for intermittent RES. Therefore, it is important that investors have a clear view on energy efficiency and demand response policies in order to be able to take the right investment decisions.

c. Removing barriers to the effective participation of demand in the electricity market.

Demand participation in the electricity market must be considered as key.

Nevertheless, the European Commission should avoid to attract demand participation in the electricity market, based on out-of-market measures distorting the market (as this is the case for RES), but on a level playing field where the same services get the same remuneration. In this respect, we stress that demand response, having a limited number of interruptions and being of limited duration, does not offer the same service than a generator that is available most of the time, e.g. energy efficiency and demand response can only function as a short-term backup facility for intermittent RES.

We believe that a well designed and well implemented energy market offers appropriate and sufficient diversified opportunities (via day ahead market, intraday market, balancing market (including ancillaries services)) to attract effective demand participation in the market taking into account the demand flexibility characteristics.

2. The effectiveness of the capacity mechanism addressing the identified market failure should be demonstrated and that it is additional to what would have occurred under normal market rules.

Yes. We understand that the effectiveness and advantage demonstration (by

simulations or other means) takes place before introducing the CRM, as the removal of a once introduced CRM might lead to incalculable detriments in many respects. However, it is unclear how this “demonstration” of the added value of a CRM should look like in practise.

3. *The duration of the application of the capacity mechanism should be clearly limited and clearly specified,*

a. *The impact on the market of the introduction of capacity mechanisms should not make it difficult to reverse that decision in the future.*

A well designed and well implemented CRM will lead to a balance between capacity offer and demand. In case more capacity is provided than required, the CRM value will decrease and phase out automatically.

A strategic reserve as a first step to guarantee SoS for a limited period of time offers here the best solution since it can be easily removed.

b. *The necessity of retaining reinstating a capacity mechanism should be subject to review.*

A permanent monitoring of the results produced by the CRM is recommended. Reviewing of a CRM is possible in particular in order to align different models in different Member States, but one should realize that a CRM has a long term adequacy objective.

Therefore, in order to offer sufficiently stability to investors, any review of a CRM should have no retro-active impact (e.g. power plants having received a remuneration commitment for a new investment for a certain period, e.g. 10 years, should keep this remuneration and not be subjected to the review). It is important to have sufficient consultation with all stakeholders before implementing any changes to an existing CRM model.

4. *Any capacity mechanism should be open to electricity undertakings operating in other Member States, to the extent they are able to make the electricity available in markets to which the capacity mechanism is established.*

Yes. There must be a level playing field between capacity bids offering the same capacity service to a Member State, independently whether that capacity is located within that MS or not. As a consequence a cross border CRM will require a supranational organization.

5. *Any capacity mechanism should not act as a barrier to cross border trade or competition in the internal market by:*

a. artificially altering trade flows or the location of production, in particular by:

- i. restricting the ability of electricity undertakings in the Member State to sell their electricity to customers elsewhere in the internal market, (i.e. capacity physically located in a Member State should not be reserved for that Member State).**

OK

- ii. distorting the commercial behaviour of generators in the day ahead and intraday markets.**

OK

- iii. distorting investment signals in the internal market leading to inefficient locational choices.**

One of the key features of a CRM is that it can include efficient and necessary locational incentives. Nevertheless, in order to minimize market distortions, CRM's should be coordinated between neighboring countries in order to come to an overall optimal adequacy.

- iv. distorting investment signals in the internal market leading to the displacement of new investment from one Member State to another.**

Capacity markets should be introduced in a coordinated way.

b. distorting dynamic incentives/crowding out;

- i. The incentive on consumers or generators to respond to high prices at periods of scarce capacity should not be diminished.**

OK.

- ii. The mechanism should not undermine incentives on the electricity market to deploy new techniques for demand reduction or electricity storage and generation.**

OK, but there must be a level playing field between capacities offering the same service, meaning that the same requirements should be applied for demand as for generators when they receive a remuneration. Therefore, appropriate reliability criteria should be installed.

Furthermore we believe that a well designed and well implemented energy market offers appropriate and sufficient diversified opportunities (via day ahead market, intraday market, balancing market (including ancillaries services)) to attract effective demand participation in the market taking into account the demand flexibility characteristics.

c. creating market power or exclusionary practices;

- i. The mechanism should not strengthen or maintain the market power of incumbent firms.**

Principally, yes, but

- as soon as the EU target of an internal energy market will be reached, the position of a player in a local market will not be relevant.
- the CRM-mechanism should not focus on market power. Competitions issues shall be addressed by other regulatory frameworks (“one problem, one instrument”).

ii. The mechanism should not act to maintain inefficient market structures or undertakings, acting to deter new entry.

A CRM must be implemented in an environment based on a level playing field for all actors and assets, without competitive distortions, neither by positive discrimination nor by negative discrimination.

Until this necessary environment is achieved a strategic reserve can help to guarantee SoS without deterring the market.

6. To be non-discriminatory a capacity mechanisms should

a. be allocated after an open competitive bidding process.

A CRM must respect free market rules in an environment based on a level playing field for all actors.

b. allow demand response and energy efficiency solutions to bid into capacity markets on an equal basis to generation.

There should be no discrimination between capacities as far as they offer the same characteristics and reliability.

Nevertheless, we believe that a well designed and well implemented energy market offers sufficient appropriate opportunities to attract demand response (e.g. too low price caps in energy markets will discourage demand response).

7. Not be confined to any particular generation technology, i.e. being tech. neutral (insofar as the mechanism is directed towards security of supply concerns – this may not apply if other objectives are also being pursued).

There should be no discrimination between capacities as long as they are compliant with the same set of technical availability requirements. Concerning the pursued objectives, we believe that CRM objectives should be limited to SoS objectives.

8. Capacity mechanism should be at least cost:

a. The direct costs imposed on suppliers or others electricity undertakings must be kept to the minimum necessary.

A CRM must aim for the most cost effective solution for the whole power system, i.e. the combined cost of commodity and capacity.

However, the CRM cost depends highly on the setting of the parameters (reserve margin, strike price, ...). The potentially low cost of a strategic reserve is a major argument to implement it for a limited period of time in order to guarantee SoS.

b. Persons providing capacity under the obligation must not be overcompensated.

A well designed and well implemented CRM, respecting free market rules in an environment based on a level playing field for all actors and assets will offer sufficient predictability and stability. It will not lead to overcompensation but will lead to – efficient – CRM prices. Therefore, regulatory interventions in a CRM complementing the energy market should be avoided: a CRM must not lead to re-regulation.

c. Any selection process in the mechanism should be conducted in a transparent, open and non-discriminatory way which is market based.

A CRM must respect free market rules in an environment based on a level playing field for all actors and assets.

d. The duration of any compensation to generators under the mechanism should be clearly justified.

A well designed and well implemented CRM must offer sufficient long term predictability and stability to all actors, investors and customers.

9. Costs associated with capacity mechanisms should be allocated to the beneficiaries of secure energy supply with different classes of consumers being treated in a non-discriminatory way.

As long as consumers cannot choose their individual desired level of SoS on their own it is not always clear who are the beneficiaries of and who are the contributors to security of supply and to which extent security of supply should be socialized. Anyway, one should avoid “overcompensation” for generators as well as “double discount” for customers.

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