

VCI response to European Commission public consultation on generation adequacy, capacity mechanisms and the internal market in electricity

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General remarks on capacity mechanisms

Capacity mechanisms represent an instrument for triggering investments related to conventional electricity generation capacities able to back up intermittent producing renewable energy sources. Corresponding investments may be lacking in the future due to reduced annual running hours of back-up power plants as a result of increasing feed-in of renewable energy sources leading to insufficient coverage of investment costs.

VCI is not in favour of further introduction of capacity markets in the EU, as consumers would be faced with additional costs then. Consequently, in the view of VCI, introduction of capacity mechanisms should be considered as an ultima ratio only, in case no conceivable market-based alternatives would lead to sufficient investments in capacities. Alternatives may encompass inter alia fostering energy markets cross-border, assessing and introducing a new electricity market design at regional and/or European level, coupling renewable support schemes with incentives for investments in capacities, enhanced demand-side participation and further R&D related to storage of electricity.

If capacity mechanisms were introduced in the EU anyhow, the underlying set-up should be as market-based as possible and a reasonable degree of harmonisation should be envisaged, in order to create a level playing field, to support use of capacities cross-border and to generate trust of potential investors in the political reliability of such an instrument.

Answers to the consultation questions

INVESTIGATING THE INTERNAL ENERGY MARKET

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

Current market prices do not seem to attract investments to build flexible generation capacity. This might be caused by a current lack of demand (i.e. no new investments are needed yet) or by unsuitable price signals due to the existing electricity market design. The latter issue relates to the “missing money problem”. However, the money for investments is not likely to be missing. Instead, current electricity market mechanisms are not directing investment resources to the desirable purpose, i.e. installation of flexible (conventional) capacities. With respect to this, a modified electricity market design must be elaborated before considering introduction of market-interfering instruments such as capacity mechanisms. Introduction of capacity markets should apply ultima ratio only, solely in case of evident market failure, insufficiency of measures supporting a functioning market and no alternatively applicable alternated electricity market design.

(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?

Yes, VCI believes that support for specific energy sources undermines investment needed to ensure generation adequacy. Direct financial support, priority dispatch or special network fees are generally not market related instruments, regardless of the type of energy source affected and should therefore be omitted as far as possible. Investments are particularly undermined by selective priority dispatch as this influences the merit order and consequently the electricity price, not reflecting the level of demand. Exemplarily, the priority dispatch of renewables in Germany results in mitigated electricity prices due to marginal costs of renewables close to zero. In addition to reduced running hours this results in a lower recovery of investments with respect to conventional energy generation facilities, potentially hampering related investments.

(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?

Such instruments do support security of supply. Cross-border trade enables energy flows between neighbouring countries compensating for lacking and excess capacities. Well embedded cross-border markets can therefore cover the demand of backup capacities to

some extent as they potentially provide enhanced supply flexibility due to an enlarged market scale. Liquid intraday and balancing markets provide a basis for efficient short-term trading. The timeframe depends on the proper finalisation of the internal market and additionally on the timespan required for build-up of interconnection capacity up to an economically efficient level.

(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?

Cross-border trade and accompanying growth of market areas should be enforced and market distortions must be removed. Strengthening and incentivising demand side participation on a voluntary basis is another important contribution to security of supply and generation adequacy. Additionally, coordination and consistent harmonisation of EU energy policy (e.g. renewable support) should be envisaged to provide a level playing field, more efficient cross-border markets and enhanced security of supply. Furthermore, renewable support schemes should be coupled and aligned with market-based incentives for usage of back-up power capacities by a new market design, including market rules able to cope with the more dynamic capacity requirements, the market participants are faced with. Good practices on information exchange with respect to e.g. generation adequacy on national, regional and European scales as well as between the market players is another significant aspect.

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

Member states must remove national market distortions and should ensure to implement all measures from the third energy package. Member states should assess the impact of their individual (national) energy policies on the European scale. Total and intermittent capacities installed within individual member states do already have an effect on neighbouring countries. One adverse effect of insufficient cross-border impact assessment occurring already nowadays is for instance a pronounced use of transmission capacities in neighbouring countries in case of temporary excess production of renewables. Additionally, some states rely on electricity imports. Changes of installed (back-up) capacities on a national level can impact on neighbouring countries likewise. Along with such impacts, save supply and competitiveness of industries may be compromised.

(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?

Public authorities should assess the consumers' demand with respect to security of supply by studies and consultations (either on national or at European level) of consumers. Such assessments should reflect the specific requirements of different consumer groups and consider economic aspects such as competitiveness as well. Security of supply is an essential element to secure and expand a competitive industrial sector. Industrial

consumers are vulnerable to e.g. sub-second supply interruptions and minor voltage variation which are not relevant for e.g. household consumers. Therefore, standards for security of supply should primarily align with the needs of consumer groups with high quality requirements.

ASSESSING GENERATION ADEQUACY

(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
- b. Regional Level
- c. European Level

At the European level, generation adequacy assessments are conducted by the summer and winter outlooks by ENTSO-E. There should be a certain degree of harmonisation with respect to data collection protocols and assessment frequency (at least biannually), as national assessments currently might be conducted at longer intervals.

(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?

An assessment of the availability of flexible capacity on a supra-national level would be adequate, as flexible capacity is a vital element for security of supply in the context of growing renewable generation capacities. Assessment on a regional level could provide information relevant for blocks of neighbouring countries (important for cross-border markets), whereas European-scale assessments would deliver an even broader view on flexible capacities. Availability of flexible capacity on the different scales (European, regional, national) should be thoroughly assessed in the biannual generation adequacy reports.

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

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

The directive applies rules for each member state. VCI believes the directive must be revised to ensure a better coordination of energy policy between the different MS to strengthen security of supply.

(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?

Security of supply and according risk assessment is a high priority issue and should therefore be conducted on a regular basis. However, such risk assessment should not only be linked to transportation capacity (transportation bottlenecks) but also to flexible capacity (generation adequacy).

(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?

Harmonisation should be subject to an assessment of existent national practices. Such assessment can lead to a guideline by best practices, leaving sufficient room for national preferences. However, if national preferences and policies are compromising security of supply and market functioning in other states, mandatory standards should apply to prevent such disturbances.

MECHANISMS TO ADDRESS GENERATION ADEQUACY CONCERNS

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

A properly implemented market design should lead to optimized efficiency due to interactions of the market participants according to economic principles. Any improper regulatory element leads to market disturbance. Despite the fact that certain elements of energy markets (e.g. third party grid access) require regulation to a certain degree, regulation should be strictly omitted where processes can be managed by market mechanisms. Capacity markets represent an additional regulatory market intervention. Therefore, implementation of capacity mechanisms should be considered a last resort, solely in case of evident market failure, insufficiency of measures supporting a functioning market and no alternatively applicable alternated electricity market design. The following measures can contribute to a functioning market:

- Removal of market distortion, providing appropriate price signals to keep gas-fired power plants in the market and to trigger investments in adequate generation capacities by a modified market design
- Strengthen trade and exchange of energy cross-border; this includes the gas market as well: to provide optimised economic conditions for gas-fired back-up power plants by competitive gas prices
- Minimise political and regulatory uncertainty at the European scale to insure security to potential investors; this includes e.g. political obstacles to the construction of new power plants
- Strengthening of demand-side participation on a voluntary basis in order to mobilise capacity potentials e.g. in the industry in a market-based manner; demand-side participation should include measures related to load management, like interruptible and shifted loads
- R&D and implementation of storage technologies and other innovations
- Completion of the internal market, by investments in interconnections between countries with low and high natural storage capacities (after detailed cost/benefit analysis), fostering cross-border day ahead, intraday and balancing markets and expanding cross-border capacities; such measures will help coping with volatility through flexible power generation and flexible storage facilities.

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

a. to ensure that new *flexible* resources are delivered?

Only in case experience shows that measures supporting a functioning market, as provided in (12), will fail to lead to high-level security of supply continuity and quality, capacity mechanisms should be put in place after thorough analysis. Conditions such as a stable regulatory landscape provided by policy makers, for instance, would enable investors to plan technically adequate power plants and to build them in adequate time. Primary importance is the achievement of lowest overall costs (e.g. by grid optimisation, back-up capacities, storage and Demand-Side Response) by applying a market-based approach.

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

If conditions supporting a functioning market, as given in (12), do not lead to appropriate generation adequacy, market functioning is considered insufficient. Maximum opportunities must be provided for efficient solutions to ensure sufficient capacity at times of highest system stress, such as demand side response.

(14) In relation to strategic reserves:

a. 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?

In line with the statements given above, capacity mechanisms should be implemented only in case of clear and evident market failure. Strategic reserves represent a specific type of capacity mechanism and their introduction would be a market intervention.

Strategic reserves could be implemented rather easily to serve as an instrument for emergency situations. However, to prevent market distortions, operation of strategic reserves must be the responsibility of the TSO. Despite the relatively easy implementation, introduction of a strategic reserve should only occur after thorough analysis and after evident market failure. Furthermore, strategic reserves are associated with risks, described in (14b).

b. 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?

Strategic reserves are targeting on keeping power plants at or near the end of their life cycle available which were otherwise considered to be retired. This implies several risks. First, while backup capacities are kept available, investments into new and efficient facilities equipped with latest technology may be hampered. Second, it is questionable that older plants used within the framework of strategic reserves can technically comply with the variable load demand generated by volatile producing renewable energy sources. Third, plant operators might be incentivised to announce retirement of their facility although still operating economically, in order to receive more rewarding capacity premiums by the regulator. Such transfer of power plants from the market into the strategic reserve would even enhance capacity scarcity.

Furthermore, market distortion could be created due to a conflict between merit order and the commitment for usage of strategic reserves in emergency situations only. In principle, strategic reserve plants set the maximum price in the merit order. However, in certain balancing periods, the electricity price at balancing markets might exceed the price of the strategic reserve, but the demand might be still coverable by the intraday and balancing market. In such cases the political pressure on TSOs might be high to use strategic reserves in order to (artificially) lower the electricity price, without a technically valid reasoning to maintain security of supply. Implementation of strategic reserves may be relatively easy; however their removal is much more difficult. Any strategic reserve should obey a market-based approach for determining the needed volume thus ensuring that the lowest cost solutions are awarded.

(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?

In general, market based instruments are least prone to market distortion. The more regulatory elements involved, the higher the risk of market distortions. Methods based on call for tenders, related to ex-ante determination of quality and quantity of capacity demand reveal enhanced potential for market distortion and non-efficient prices. In principle, any capacity market is distortive for functioning of the internal energy market. Incentives for investments should be provided by market-based price signals.

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?

A capacity market model not leading to market distortions and providing maximum opportunities for demand side response, where consumers that are able and willing to provide flexibility by selling back their capacity into the market based upon a strong electricity price signal is a way to ensure flexibility in a low carbon electricity system.

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

Generally, capacity mechanisms are prone to non-reversibility or the reversibility is at least associated with great difficulty. Introduction of capacity mechanisms incentivise existing generators to wait for the upcoming call for tender or auction in order to receive the annual capacity fee on top of the market price. This would remove any purely market-driven investment. Abolishing such mechanisms would lead to strong distortions between market-driven investments on the one hand and investments based on capacity mechanisms before abolishment on the other.

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

The least impact of capacity mechanisms, if any, can be expected by implementation of schemes as market based as possible. Therefore, if capacity mechanisms were implemented, determination of the necessary amount of capacity should be as market-based as possible.

Ideal in the view of VCI would be the alignment and integration of renewable support schemes and incentives for back-up capacities into an electricity market design at regional and/or European level. For example, market parties at the trading level could be made responsible/incentivised to ensure their own back-up capacities in their portfolio in order to

be able to compensate for the volatility of renewable sources and therefore be able to cope with the consumers' requirements in terms of security and quality of supply.

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

Whereas capacity mechanisms are long term instruments, balancing markets act on a short-term scale. Both regimes have the procurement of capacity in emergency or congestion situations in common. Therefore, when considering implementation of capacity mechanisms, balancing markets could be a starting point to set up suitable schemes for capacity mechanisms. A priority issue in this context would be to prevent disturbances of balancing markets through capacity mechanisms. As already pointed out, when implementing strategic reserves, the corresponding price can be lower than the one for electricity derived from balancing markets in certain situations. The use of strategic reserves would then interfere with balancing markets. In any case additional mechanisms must not distort or cannibalise functioning market segments (e.g. balancing).

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

If capacity mechanisms were implemented Europe-wide, a blueprint would be helpful to foster an EU-wide level playing field and a liquid cross-border market. It is hardly conceivable to have an internal energy market with 27 different schemes of capacity mechanisms in place. A blueprint could create trust for potential investors as an EU-wide solution would demonstrate a certain degree of political security and investors were able to deal with a limited (ideally one) set of business rules throughout Europe.

FRAMEWORK FOR ASSESSING CAPACITY MECHANISMS

(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, it should, in order to provide guidance to national policy makers and regulators and to prevent distortion of the internal market.

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

- a. Should any criteria be added to this list?
- b. Which, if any, criteria should be given most weight?

Top priority is associated with alternative measures like enhanced efficiency and demand side participation (criteria 1b, c), increase interconnection and induce steps to encourage effective competition (criterion 1a). Capacity mechanisms should not deteriorate cross border trade or competition (criterion 5), they should be non-discriminatory with respect to procurement and demand-side participation (criteria 6b) and at least cost (criterion 8).