

## VIK- Response

to the

### ***Consultation on generation adequacy, capacity mechanisms and the internal market in electricity*** *(published 15 November 2012)*

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#### **General Remarks**

Due to the increasing share of electricity produced from renewable sources, a lack of reliably available generation capacity is expected for the (near) future: Renewable sources need available capacity as backup to cover electricity demand, in the short term (due to insufficient forecasting accuracy) as well as the long term (during spells of low solar or wind power production). At the same time, existing electricity markets are supposed to send only insufficient signals to invest in such reliable capacities. Against this backdrop, discussion about introducing separate capacity mechanisms has started in many EU member states. Provided that there really is a need for implementing such mechanisms, they have to meet certain requirements. In VIK's opinion, incentives to secure adequate generation capacity should be created in close connection with the design of the future support scheme for renewables. In doing so, the following principles should be observed:

- The necessary capacity should be ensured by market-based mechanisms.
- Capacity needs should be met in an optimal way, taking into account European, regional and grid-related aspects, by making use of the advantages of cross-border integration to reduce the need for capacity.
- Voluntary demand-side measures should be used as much as possible to reduce the need for further capacity and to take advantage of low-cost solutions.
- European coordination and enlargement of cross-border grid capacities can help to further reduce the need for (national) capacities.
- Coordinating capacity mechanisms with RES-E support schemes can contribute to integrate renewables into the market.
- Strictly national capacity mechanisms at member state level must be prevented. Capacity mechanisms (if any) shall be coordinated at regional and/or EU level
- Capacity mechanisms shall fully comply with the internal market in order to avoid distortions in the electricity market.
- Security of supply should be ensured at the least possible costs, so as not to threaten international competitiveness of industrial energy consumers

## Responses on the Questions

### Investing in the Internal Energy Market

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

*VIK: The fact that there is little investment in (flexible) capacity does not necessarily mean that capacity mechanisms are needed. On the contrary, this could be a signal that no new investment is needed yet.*

*As a consequence capacity mechanisms must themselves be seen as market interventions only to be used as a last resort when it is clearly demonstrated that the market itself has failed.*

- (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?

*VIK: Priority grid access given to intermittent electricity generation from renewable sources leads to a reduction in the runtimes of traditional power plants and their ability to recover their fixed costs. High guaranteed incentives for renewables, combined with priority dispatch, means that the energy generated by RES-E installations is offered to the market at zero price without any consideration of the level of the demand; as a consequence, marginal prices fall at times of high RES-E production, even below the level corresponding to the cost-effectiveness of standard power plants. This undermines incentives for investment in new (flexible and reliably available) power plants.*

- (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?

*VIK: Enlargement of market areas makes it possible to benefit from scale effects. Therefore, closer integration of such short-term markets will most likely lead to an improvement of security of supply, since it will allow for the usage of excess capacity located in neighbouring countries.*

*The establishment of markets must be supported by investment in more interconnection between market areas. Creating Cross border markets by market coupling alone will not contribute to the desired level of security of supply in all member states as some areas are not connected to a sufficient extent.*

- (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?

*VIK: Voluntary demand side response should be facilitated, e.g. by adapting market structure, market products, and bidding procedures in the shorter term physical markets. This will be necessary to secure that financial incentives reach the consumers and to adapt to the specific restrictions given by various consumer technologies.*

*Moreover, at European level, greater coordination and harmonization between different member states, as well as between market players in different members, could help strengthen security of supply. European guidelines of good practice may improve the know-how in different member states. European rules or institutions may improve coordination by facilitating exchange of information and by spreading information about best practices, e.g. with regard to assessing generation adequacy.*

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

*VIK: When planning national energy policies, member states should take into account the effects of such measures on other member states and on the internal energy market. Already today, some countries depend on (and rely on) importing power from their neighbours. Any change in available capacity in one country therefore has an impact on generation adequacy in other countries. This should be taken into account by closer coordination between national authorities.*

- (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?

*VIK: First step would be to assess consumers' preferences on security of supply, or more broadly speaking, quality of supply. Therefore, authorities (either on national or European level) should conduct studies – and in this process directly ask consumers – to what extent consumers value security of supply. The valuation of reliable power supply may vary between different consumer groups, e.g. households and industry, as well as between different consumers within such a group. These should be taken into account when setting up regulatory measures like quality regulation, but also when setting incentives, e.g. for interruptibility.*

*The question (6) asks how “preferences for lower standards” can be reflected. VIK's experience is quite different: Some consumers have strong preferences for higher security of supply. This is especially true for industrial consumers. While households often can stand shorter interruptions (e.g. few seconds), or not even notice very short interruptions, industrial consumers face economic losses due to loss of production caused by short interruptions (often less than one second). Hence, the problem is not how to deal with preferences for lower quality, but for higher quality.*

### **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

*VIK: At the moment, generation adequacy at the European level is assessed by ENTSO-E (biannual summer / winter outlooks). At national level, generation adequacy might be assessed at larger intervals. There should be some harmonization, to align these assessments at the shorter interval (at least biannually)*

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

*VIK: Since generation and injection of RES-E power is rapidly growing, with its volatility being the most important reason for growing troubles in terms of security of supply, the availability of flexible capacity (and not only the availability of sufficient capacity) is an aspect that should be assessed more thoroughly in the biannual generation adequacy reports, as well at national as at European level.*

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

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- (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?

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- (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?

*VIK: Harmonization of Security of Supply Standards across the EU should be subject to a prior assessment of current practices, identifying the best practice. This could form the basis for guidelines of good practice. Such guidance could leave enough room to account for different national preferences. Mandatory standards should only be set as a measure of last resort, e.g. if some national policies (justified by "national preferences") endanger security of supply in other member states.*

### **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?

*VIK: In VIK's opinion, market forces have the potential to deliver the most efficient solutions, as long as the framework of market rules is set correctly. Any improper regulatory intervention might lead to market distortions. Capacity mechanisms constitute an additional regulatory intervention in the energy market and should therefore be taken into account only as a measure of last resort, if it is clear that markets are not functioning, and be coordinated at regional and/or EU level. There are instruments that can improve security of supply that should be implemented and strengthened in the first place, such as improved voluntary demand-side response, closer integration of (short- and long-term) cross-border markets, expanding of cross-border capacities and exploring of storage possibilities (classic hydro-pumped storage as well as new concepts, e.g. storage by load-shifting and using industrial products as a substitute for electricity storage).*

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

- a. to ensure that new *flexible* resources are delivered?
- b. to ensure *sufficient* capacity is available to meet demand on the system at times of highest system stress?

*VIK: See answer to question (12): Only when the measures mentioned above are used, and experience shows that they will not suffice to secure quality of supply should explicit capacity mechanisms be put in place.*

## (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?

*VIK: A strategic reserve perhaps could be implemented rather quick and easily, and thus could serve as an emergency measure to secure capacity adequacy in unforeseen circumstances. But generally, the decision whether to implement any capacity mechanism at all should be based on a thorough analysis of the situation, so the advantage of easy implementation should not play an important role under normal circumstances.*

*Moreover, strategic reserve has some serious drawbacks, see answer to question (14b.) below.*

- 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?

*VIK: Strategic Reserves often are made up of old plants which would otherwise be retired as uneconomical. The introduction of a strategic reserve therefore might create an incentive for the operator of an older plant to declare his power plant as uneconomical, threatening to retire it, only to receive the capacity premium paid by the regulator. This may create a situation where power plants are retired from the market and transferred into the strategic reserve, thereby further aggravating the capacity scarcity in the normal electricity market.*

*Moreover, strategic reserve requires a strong commitment by the regulator / TSO and a reliable regulatory framework to use these power plants only to avoid blackouts, i.e. to guarantee security of supply. But in periods where the electricity price is high, there could be strong (political) pressure to use strategic reserve to decrease prices, regardless whether security of supply is in jeopardy. This may lead to significant market distortions and may negatively affect all market parties, including capacities that are not part of a strategic reserve.*

*Furthermore it is questionable whether such older power plants can provide the necessary flexibility to accommodate volatile RES-E production.*

## (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?

*VIK: The fewest market distortions can be expected from mechanisms that are as market-based as possible, see answer to question (16) below. Most distortions are to be expected from capacity schemes that are heavily regulated and centrally implemented, like classic Call for Tenders where the regulator determines the amount and the "quality" (in terms of flexibility, technology, perhaps location) of the capacity needed.*

- 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?

*VIK: See Answer to question (16) below. Additionally, improvement and enlargement of existing instruments like contracting more restoration and replacement reserves could be a easily implementable (first) step.*



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

*VIK: Generally, the implementation of any capacity mechanism would be reversible only (if at all) with great difficulty. Since such mechanisms aim at incentivising new investment, their introduction (or their announcement) has the effect that it gives the incentive for existing generators to wait for the next “Call for Tender” to receive the yearly capacity fee in addition to the market price. Purely market-driven investment would be erased as long as the mechanism is in place. It will be very difficult to abolish such mechanisms, since this would lead to huge competitive distortions between investors that built capacity during the time the mechanism was in place and those who might want to invest after the abolishment.*

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

*VIK: Market-based instruments have the highest potential to reduce costs for consumers. Therefore it is worthwhile to use market mechanisms as far as possible. Therefore a capacity mechanism – if necessary - should be examined that leaves the determination of the necessary amount of (flexible) capacity to the market. This could e.g. be done by giving suppliers of RES-E the responsibility to ensure enough backup and/or storage-capacity to cover their supply to final consumers – i.e. they should not only procure energy (e.g. from RES-E producers or the exchange) but also capacity/flexibility.*

*Since volatile RES-E installations are a main reason for capacity concerns (see answer to question (2)), one could envisage a system where RES-E support and capacity responsibilities / incentives are combined: By limiting the support to renewables to a premium (based on the difference between the effective generation cost and the electricity price of the reference market) RES-E producers will be incentivised to sell their electricity as efficiently as possible in the market. If producers of renewable energy are incentivised to integrate their electricity efficiently in the market, the price volatility and the need for additional capacity will be reduced. Moreover, RES-E suppliers could also be responsible (or be incentivised) to ensure their own flexible capacity needed to accommodate their volatile RES-E-production to become compatible to consumers’ needs (e.g. by turning volatile RES-E production into reliably available standard electric power products like base-load or peak-load products, or into profiles matching their customers’ load profiles). That way, the “quality” (e.g. flexibility) of new capacity will be most fitting to the needs of the market.*

*In addition to addressing the capacity adequacy issue, such a combined mechanism could help integrating RES-E into the market.*

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

*VIK: Existing balancing markets could be seen as some kind of capacity markets and might therefore be used as a starting point for the discussion. While there are similarities between balancing and capacity markets, i.e. in terms of provision of backup capacity for emergencies (as opposed to other markets where not capacity but energy is provided), there are some differences, the most obvious being the different time span – balancing markets are very short term, while capacity markets focus on a very long term perspective.*

*In any case, additional mechanisms must not distort functioning market segments. Where a well-functioning balancing market is already in place it has to be avoided that this market is cannibalized, i.e. capacity simply moves from the balancing market to the new capacity mechanism. This would only make the system more expensive without having an effect on the amount of available capacity.*

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

*VIK: Cooperation and Coordination between member states should at regional and/or EU level be the preferred way to come to capacity mechanisms (if any) that are compatible region-wide and/or European-wide. A centrally devised, mandatory EU-wide capacity mechanism would risk disregarding regional or national specificities.*

### **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?

*VIK: Such Commission guidance could be very helpful for national legislators and regulators.*

- (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?

*VIK: Most weight should be given to the use of alternative or supporting measures, such as demand response or energy efficiency (criterion 1b), increased interconnection (criterion 1a), to reduce the need for additional capacity mechanisms as far as possible. If a capacity mechanism is to be introduced, it should not distort competition, be it cross-border or within any member state (criterion 5), and should not focus on generation alone but facilitate participation of all kinds of flexibilities, e.g. demand response or storage facilities (criterion 6b). To secure competitiveness and affordability, the least cost solution should be implemented (criterion 8).*

***For 65 years, VIK represents energy intensive consumers in sectors like aluminium, chemical industry, glass, paper, steel or cement. VIK advises its member companies on all energy and energy-related environmental issues. VIK unites 80 per cent of industrial energy consumption and 90 per cent of independent power generation in Germany.***