

Consultation of the European Commission on generation adequacy, capacity mechanisms and the internal market in electricity

7 February 2013

General Remarks

Before answering the 20 questions from the questionnaire IFIEC Europe (IE) would like to make a few general remarks.

IE has observed that in some Member States there is very limited or no investment in new non-renewable generation capacity. In some Member States there is even not enough spinning reserve available because of mothballing or decommissioning. IE believes that this could lead to risk of blackouts. According to IE the lack of investment in new capacity or the lack of “spinning” capacity is mainly caused by market distortions and specific barriers to investment.

For example, in some Member States the market is severely distorted by the way renewable energy is treated. In a lot of Member States renewable energy is heavily subsidized and its development is accelerated. This subsidized electricity is offered at zero cost on the market. As a result conventional (flexible) plants are pushed out of the merit order. Due to this subsidization the market is distorted and prices do not give the appropriate signals and prevent investment in needed flexible generation capacity.

The market is further distorted by the fact that intermittent renewable energy does not pay the cost they induce to the system. Intermittent renewable energy does for example not pay for its (total) imbalance costs. As a result renewable electricity finds its way to the market at a non-cost reflective level. Due to this market distortion the system does not provide correct market prices and therefore prevents investment in needed capacity. This leads to a system that is not cost-efficient and encourages free rider behaviour including an infringement with the ‘causer pays’ principle.

But there are also other important barriers to investment in needed capacity. The most important one is political and regulatory uncertainty and unpredictability. For example, decisions to phase out nuclear energy or not deciding on fuel mix policies deteriorate the investment climate. Changing the rules of permitting procedures or constantly changing levies and taxes create regulatory barriers and make uncertainty an obstacle to investment.

Current market developments lead to a further deterred investment climate. There is low demand for electricity due to the recession and capital is scarce. As a result utilities keep minimal capacity available to squeeze costs. Combined with relative high gas prices this leads to the fact that utilities do not invest in flexible capacity.

IE believes that the European Commission should focus on removing market distortions, and make sure that all Member States create a stable, predictable and efficient regulatory and political environment to restore the well-functioning of the market instead of mitigating the results.

If after the above mentioned measures there is really a need for implementing capacity mechanisms because the market still does not provide enough capacity, which is to be clearly demonstrated, these instruments have to meet certain requirements:

- Security of supply should be ensured with the most economically efficient approach, so as not to threaten international competitiveness of industrial energy consumers:
 - Therefore the total economic impact to final consumers, of the whole system (including RES-E support schemes, grid costs), must be accurately demonstrated.
 - The costs of any mechanism should be limited to only the missing money portion, which is to be clearly proven: any kind of windfall profits must be obviously avoided.
- Any instrument should provide maximum opportunities for demand side response.
- Capacity needs must be met in an optimal way, taking into account the optimisation of grids (European and regional), back-up capacities and storage (including non-conventional like hydrogen or ammonia, with rather low transportation costs).
- European coordination and enlargement of cross-border grid capacities up to an economically efficient level can help to further reduce the need for (national) capacities. Grid capacities especially cross-border integration reduce the need for back-up capacity and storage.
- The necessary volume of needed capacity should be determined by the market.
- Coordinating (or combining) capacity mechanisms with RES-E support schemes can contribute to integrate renewables into the market.
- Distortions in the electricity market should be avoided at all time.

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?

IE: IFIEC believes there are different reasons that prevent investment in needed generation in some Member States.

In a lot of Member States renewable energy is heavily subsidized. As a result conventional plants are pushed out of the merit order. Due to this market distortion current market prices do not give the appropriate signals to the market and prevent investment in needed (flexible) generation capacity.

The market is further distorted by the fact that some market participants do not pay the (full) cost they induce to the system (infringement to the "causer pays" principle). For example intermittent renewable energy does not pay for its total imbalance costs. This leads to a system that is not cost-efficient and encourages free rider behaviour including infringement with the 'causer pays' principle. The system does not provide the correct market prices and therefore prevent investment in needed generation capacity.

But there are also other important barriers to investment in needed generation capacity. The most important one is political and regulatory uncertainty. For example, decisions to phase out nuclear energy or not deciding on fuel mix policies deteriorate the investment climate.

Thirdly current market developments lead to a further deterred investment climate. There is low demand for electricity due to the recession. Utilities keep minimal capacity available to squeeze costs. Combined with a high gas prices this leads to the fact that utilities do not invest in excess capacity.

- (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?

IE: Yes, IFIEC believes that support for renewable electricity undermines investments needed to ensure generation adequacy.

First of all, 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.

Secondly, high guaranteed incentives for renewable energy, combined with priority dispatch, means that renewable electricity is offered to the market

at a 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.

Thirdly, intermittent renewable energy is further supported because it does not have to pay for its (total) imbalance costs. This leads to a system that is not cost-efficient and encourages free rider behaviour including infringement with the 'causer pays' principle. The system does not provide the correct market prices and therefore prevent investment in needed generation capacity.

- (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?

IE: Yes, enlargement of market areas makes it possible to benefit from scale effects. Therefore, closer integration of such short-term markets will most likely contribute to ensuring security of supply, since it will allow for the usage of excess capacity located in neighbouring countries. With regard to the intraday market parties should refrain from OTC access. This will boost liquidity and leads to efficient use of cross border capacity.

IFIEC sees the work on the establishment of cross-border day ahead, intraday and balancing markets contributing to ensuring security of supply by the end of 2014 as stated by the European Commission, e.g. at the moment when internal Energy market is completed.

For the internal energy market, to contribute to ensuring security of supply markets need not only to be coupled in theory but also physically by investing in 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?

IE: IFIEC believes that there are a few additional steps that need to be taken at European level to ensure that internal market rules fully contribute to ensuring generation adequacy and security of supply.

Firstly, the European Commission must make sure that market distortions are taken away.

Secondly, voluntary demand side response could be released 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. Diversified schemes are needed in order to enable as many cheap options as possible.

Thirdly, liquidity in financial markets must be improved to provide necessary relief from risk in the more volatile physical markets.

Fourthly, the European Commission must make sure that all cross-border intraday capacity is offered on a market based platform.

Fifthly, at European level, a coherent energy policy is required for the tightly connected and harmonized electricity market to strengthen security of supply. European guidelines of good practice with regard to renewable energy 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 and for optimal support schemes.

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

IE: IFIEC believes that Member States can take a few additional steps to support the effects of the internal market in delivering generation adequacy.

First of all, Member States must make sure that on a national level market distortions are taken away.

Secondly, all Member States should implement all measures from the third energy package as soon as possible.

Thirdly, when planning national energy policies, Member States must take into account the effects of such measures on other Member States. 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.

Fourthly, providing a correct spot price signal, reflecting the merit curve, is important for both DSR and investors in new capacity. Therefore regular monitoring by regulators of these spot prices is also a measure that should be undertaken by Member States (and ACER).

- (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?

IE: IFIEC believes that security of supply is a collective good and must be the same for all consumers; it is therefore not acceptable to reduce the level of security of supply for specific consumer groups in general. But, to make sure that consumers that are able and willing to provide flexibility or accept to be exposed to non-firm capacity can offer their service to the market is a way to reflect the preferences of consumers in relation to security of supply.

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

IE: 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?

IE: 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 must be assessed more thoroughly in the biannual generation adequacy reports, at national as well as at European level.

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

IE: Future technological developments with regard to intermittent and storage capacity.

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

IE: The Directive gives rules to each Member State. IFIEC believes the Directive must be revised to ensure greater coordination of policy between different Member States 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?

IE: Mandatory risk assessments such as in the Regulation with regard to Gas security of supply mandatory risk assessment mostly look at if there is enough transportation capacity available. For electricity, mandatory risk assessments or generation adequacy plans could be a good idea.

Nevertheless they must not only look at transportation bottlenecks but also answer if there is generation adequacy (is there enough flexible capacity).

- (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?

IE: Harmonization of Security of Supply Standards across the EU should be subject to a prior assessment of current practices, identifying the best ones. This could form the basis for guidelines of good practices. Such guidance could leave enough room to account for different national preferences. Mandatory standards should only be set if national policies endanger security of supply in other Member States and if market functioning is hampered.

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?

IE: IFIEC believes that 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.

As we have said before, there are a few important steps to be taken to make the market function.

First of all, market distortions should be taken away. For example the over-subsidization of renewable energy in some Member States pushes flexible gas-fired plants out of the merit order. Due to this market distortion current market prices do not give the appropriate signals to the market and prevent investment in needed generation capacity. Moreover, over-subsidization is far from being cost-effective for the whole system.

Another market distortion that must be addressed first is the functioning (pricing) and the efficiency of the gas market; competitive gas prices will increase the revenues of (flexible) gas powered electricity plants, making it more profitable to invest in these capacities.

Secondly, political and regulatory uncertainty must be minimized to an acceptable risk level, like, for example, by simplifying permitting procedures and removing other policy obstacles to the construction of new power plants.

Thirdly, maximum opportunities must be provided for efficient solutions, such as demand side response and promote innovations such as electricity storage. Industrial demand response may be cheaper and can be used in a shorter term than expanding gas capacities and storage facilities. To take

advantage of such industrial flexibilities, appropriate financial incentives are needed. Furthermore, research and investments in energy storage systems (classic hydro-pumped storage as well as new concepts, e.g. storage by load-shifting and using industrial products such as hydrogen or ammonia as a substitute for electricity storage) must be stimulated to promote new technologies that are able to reduce volatility with the least possible costs.

Fourthly, the internal Energy market must be completed. Increased investments in interconnections (after detailed cost/benefit analysis) especially between countries with high and low natural storage capacities should lead to improved market functioning. Furthermore, the establishment of cross-border day ahead, intraday and balancing markets throughout the whole of Europe will contribute to ensuring security of supply. Such market integration will help coping with volatility through flexible power generation and flexible storage facilities. Set up closer integration of (short- and long-term) cross-border markets, expand of cross-border capacities and explore the possibilities of storage will also be very helpful.

If after these important steps it is clear (after a proper qualification and quantification) that the market does not succeed in providing the necessary secure quality of supply a capacity mechanism can be introduced.

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

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

IE: See answer to question (12): IFIEC considers market functioning insufficient when the above mentioned steps are taken it is clear (after a proper qualification and quantification) that the market does not succeed in providing the necessary secure quality of supply. If for example policy-makers would provide a stable regulatory landscape, then investors in (generation) capacity would be able to plan what kinds of plants are needed, and build them in adequate time. It is of prime importance that the lowest overall cost is achieved (through optimisation of grids, 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?

IE: See answer to question (12): IFIEC considers market functioning insufficient when the above mentioned steps are taken it is clear (after a proper qualification and quantification) that that there is no generation adequacy. To ensure that sufficient capacity is available maximum opportunities must be provided for efficient solutions, 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?

IE: IFIEC believes that a strategic reserve is a capacity mechanism in its purest form. As said previously, capacity mechanisms constitute an additional intervention in the energy market. A capacity mechanism can only be introduced if it is clear (after a proper qualification and quantification) that markets are not functioning.

However, it is more efficient to remove market distortions and to avoid uncertainties due to sudden policy or regulatory changes (such as a nuclear phase out) on the energy market.

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, a 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?

IE: Strategic reserves are often 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. Furthermore, while strategic reserves are quick and easy to implement, the removal of a strategic reserve 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.

Above that, 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?

IE: Any capacity mechanism is distortive for the functioning of the internal market. Nevertheless, the fewest market distortions will come from the most economically efficient mechanisms. We must not forget that Europe needs to restore its competitiveness and any mechanism will need to be evaluated in relation with its potential consequences on the total electricity costs.

- 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?

IE: A model of a capacity market that does not lead to market distortions and provides maximum opportunities for demand side response, where consumers are able 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. Positive externalities, like the avoided CO₂ emissions and grid development costs, should be taken into account in the remuneration of demand side response.

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

IE: 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" or auction 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?

IE: Since intermittent renewable electricity generation is a main reason for capacity concerns, one could envisage a system where RES-E support and capacity responsibilities / incentives are combined. If producers of renewable energy are incentivised to integrate their electricity efficiently in the market, the price volatility and the need for additional back-up capacity will be reduced. This would then limit the cost impact for final consumers.

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

IE: Some existing balancing markets can already be seen as some kind of capacity markets and might therefore be used as a starting point. While there are similarities between certain balancing and capacity markets, i.e. in terms of provision of back-up 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 e.g. (balancing) 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?

IE: IFIEC believes that the European Commission should make sure that the Internal Energy Market is completed and the implementation of an EU-Wide capacity mechanism would mean that the Internal Energy Market has failed. The complementation of the Internal Energy Market cannot be done if there are 27 different capacity mechanisms. Therefore the European Commission must remove the underlying causes of the deteriorated investment climate instead of mitigating the results of market distortion and political and regulatory uncertainty. Above that the European Commission must make sure that Member States take the effects of their national policies on other Member States into account.

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

IE: Such criteria should be mandatory on the condition that they are set to not distort the electricity market.

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

a. Should any criteria be added to this list?

IE: Yes and it is the most important one: cost competitiveness. Any scheme must be evaluated according to its impact on the total electricity cost and the schemes to be chosen must provide the necessary conditions

for the most cost effective solutions - like demand side management - to emerge.

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

IE: Most weight should be given to securing competitiveness and affordability, with the implementation of the most cost effective solutions, (which, in our opinion, is a better formulation than criterion 8). Then, the use of alternative or supporting measures, such as removal of distortions causing the need for capacity mechanisms, demand response or energy efficiency (criterion 1b), increased interconnection (criterion 1a), to alleviate 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), therefore the wording of criterion 6a is currently not acceptable. An open competitive bidding process for capacity is of course a prerequisite, but the mechanism should not be allocated it should be installed. Last but not least, it should not focus on generation alone but facilitate participation of all kinds of flexibilities, e.g. demand response or storage facilities (criterion 6b).