

**Generation adequacy, capacity mechanisms
and the internal market in electricity
(EC public consultation: 15.11.2012 – 07.02.2013)
EFET¹ response**

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

Many markets are currently characterised by a situation of oversupply, for various reasons. The precipitating factors include:

- An unanticipated, large amount of added RES capacity in some geographies
- Conventional source generation investments, which have come on line because they were decided before, or in the early stages of the RES capacity boom and the financial and economic crisis.

Current low wholesale market spot and forward prices, if maintained, might be expected to lead to divestment or mothballing of plant rather than to new investments.

However, investors have several factors to consider before taking investment or divestment decisions, such as evolution of the supply-demand balance over the coming years, the political agenda, structural evolutions of the market, social circumstances, or corporate strategy. In some cases, investors may not be allowed to leave the market freely, on the basis of fears of regulators or TSOs that intermittent generation sources would not be able to cover peak loads or that removal of capacity would induce price spikes. Such interventions indicate a situation where at least some national policymakers and regulators do not trust the energy only market to deliver.

¹ The European Federation of Energy Traders (EFET) promotes and facilitates European energy trading in open, transparent and liquid wholesale markets, unhindered by national borders or other undue obstacles. EFET currently represents more than 100 energy trading companies, active in over 27 European countries. For more information: www.efet.org.

In any case, forward markets can only be expected to play a partial role in investment or closure decisions, as their rather short term (3 to 4 years deep) horizon hardly covers the time required for development, construction and amortization of most generation or demand side assets. As a result, even if market price levels were more favourable to prospective investors, they would not necessarily alone make a business case for investments decisions in new assets.

Furthermore, the uncertainties around RES targets and support mechanisms, CO2 markets, energy efficiency targets and other existing and possibly new distorting factors (like taxes, levies, export related transmission tariffs, changes of bidding zone boundaries, NTC reductions and “allocation constraints” attributable to loop and involuntary flows) do not ease investment decisions either.

All these elements need to be taken into account in order to analyse the different components of investments or divestment decisions.

As a general principle, markets will continue to function insufficiently if distortive or transitory factors hamper their dynamics. Such may include:

- Inefficient market integration of specific generation technologies, particularly renewable sources (with absolute exemption from redispatch and non-exposure to balancing obligations in some countries)
- Limited demand response
- Caps/floors on energy prices
- Regulated consumer tariffs
- Unreliable access to the grid Inappropriate level of interconnection
- ETS malfunction
- Limited liquidity in capital and debt markets

New challenges such as market signals drawing closer to real time, heavier impact of weather conditions, and increased obligations on clearing also lead to an unfavourable investment climate. This doesn't mean however that investment decisions are prevented in all areas but probably that some technologies will find it hard or impossible to develop a business plan in the current context. And that the overall generation adequacy resulting from this environment is probably more complex and more difficult to evaluate.

Nonetheless, EFET believes that reliance on the future functionality and liquidity of the European wholesale electricity market continues to play an essential role in investments decisions. The expectation of the survival of the wholesale market brings manifold benefits. The wholesale market should

contribute to rewarding the correct type of capacity, which will be able to respond to the needs of consumers in different time horizons. It should allow new signals to emerge, for example through fluctuations in short-term spot and balancing market prices, thus rewarding companies for their available spare capacity in the energy market (MWh) at short notice and on an intermittent basis. As a consequence, it also provides some of the incentives to develop the capacity (MW) for demand response and energy efficiency in the face of high and volatile prices, provided that these prices are allowed to rise high enough. The integrity of spot and forward markets and the responsiveness of wholesale prices to supply and demand forces in the future will therefore remain an essential element of the investment-related expectations of market participants.

This is of course more difficult in a context of oversupply, but provided that demand comes back to sufficient levels compared to supply and that imbalance prices are high enough, consumers, or their suppliers, will have incentives to hedge their exposure to real time prices. Coupled with their inherent simplicity, energy-only markets therefore best deliver the European Union's strategic vision of integrated, sustainable and competitive markets. Markets should, if they are left to function unencumbered, provide crucial signals to remunerate efficient investment. This may either be in new assets or the maintenance and life extension of existing assets.

(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?

All subsidies will have a damaging impact on the ability of the wholesale market to function efficiently. But some of the schemes used in the EU at present are particularly damaging. In particular, as renewable penetration increases, it becomes more and more essential that they are subject to normal wholesale market dispatch and balancing rules. Current support mechanisms favour investment in non-responsive assets and support a non-responsive operating regime. This leads to increasing stress placed on the remaining assets and unnecessary volatility and uncertainty.

Subsidy schemes and increased volumes of renewable assets are also likely to hinder forward market liquidity from developing appropriately. This prevents forward prices from contributing to investment signals. Lower liquidity also increases transaction costs, meaning that generators are less able to optimise their trading strategies in the market, lowering their earning potential.

Market outcomes would be less uncertain if renewable producers sold their own output directly in the market, since some of this volume would be sold into forward markets, making them much more “market price sensitive”. This would mean lower “distressed volumes” appearing in the day-ahead market and help prevent extreme outcomes. Direct exposure to the market would provide more incentive on renewable producers to moderate their own output in case of negative prices, and potentially to sell other services such as frequency response.

(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?

More efficient cross-border markets will improve security of supply and will prevent local generation margins from being constrained to a specific area, thereby leading to the possibility of adequacy to be assessed at a regional or European level and decreasing the collective need for investment.

Coupling of day-ahead markets provides a positive contribution to reliability and security of supply since electricity should always flow to where it is most needed. Similar developments in intraday and balancing markets will further improve the use made of the existing assets, although the contribution to provide physical security of supply will depend on the interconnection level (very poor in some peripheral regions) and on the procedures to manage cross-border capacity.

It is therefore important to continue the timely extension of market coupling without delays for all timeframes. We are hopeful that the NWE project goes live as planned now, and that the recently announced go live date of November 2013 will remain firm. The intraday solution, including the gap-analysis work, also needs to be completed during 2013, with the aim of a wide improvement of market access conditions to interconnections and to local markets in intraday, thus allowing for the development of integrated intraday markets by 2014.

Together with the establishment of cross-border DA, intraday and balancing markets, EFET also expects that even more important benefits can be reaped (in terms of maximising available cross-border transmission capacity) by improved cooperation among TSOs in capacity calculation. This must comprehend a common method of assessment, a common grid model and application of cross-border congestion management procedures which include potential cross-border redispatch.

(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?

As mentioned above (questions 1 to 3), the wholesale price-discovery process must continue to play a central role in maintaining a match between supply and demand. Meeting the objectives of the Electricity Directive 2009/72 requires gradual compliance of all generation types to market rules (including dispatch and balancing rules) as well as phasing out energy subsidies for all types of technologies as soon as possible. In the meantime, ensuring the tradability of renewable energy attributes and promoting the harmonisation of renewable energy support schemes and the consistence of the various environmental policies across the EU should contribute to a better integration of renewable energy into the wholesale market.

The European Commission also needs to make sure that the establishment of cross-border day-ahead, intraday and balancing markets remains on track and does not incur further delays.

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

EFET believes that the establishment of the common wholesale market should be driven from a European perspective rather than a national one. Therefore, Member States should make sure that measures taken at national level should not counteract the efforts deployed at European level. As the European Commission points out in its Communication COM (2012) 663, Member States need to move away from, and resist the calls for, inward-looking or nationally inspired policies.

Regulators and governments nonetheless need to make fundamental improvements to the elements of electricity market design which lie in their remit:

- Integrate renewable power producers into the wholesale market.
- Develop and improve intraday markets by moving gate closure to H-1 and facilitating cross border exchanges to make the maximum use of interconnector capacity.
- Allow free price formation in wholesale markets and remove explicit and implicit wholesale price caps/ floors, so that the energy market can play a central role.

- Extend real-time metering to enable demand response.
- Remove unnecessary operational requirements and restrictions on generation companies, in particular allow free entrance but also free exit when plants are no longer profitable.
- Improve the functioning of the gas market, avoiding take-or-pay obligations and other restrictions on gas fired power plants and ensuring that power plants have flexible access to transmission networks and wholesale gas markets.
- Ensure a stable and consistent energy policy framework for decarbonisation based on the ETS.

Ultimately, regulators must ensure that TSOs can invest in reinforcement or, where essential, expansion of the grid, with the aim to remove or avoid structural congestion. If the development of a cross-border interconnector is indicated, the regulatory framework should create a positive climate for entrepreneurs willing to invest in a merchant line to fulfil the need, provided that these lines are perfectly integrated in the overall market design and contribute to the market and network efficiency.

(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?

EFET views consumer based measures rather favourably, as they are not likely to disrupt wholesale markets and are in line with the existing EU market design. We believe that the market design should provide sufficient flexibility for suppliers to express their ability to be curtailed or to adapt their demand based on market prices and to benefit from the flexibility they are able to provide to the system. A lot of creativity is possible in this field.

However it is likely that, in a similar way as for back-up generation, price responsiveness requires that sufficiently high and volatile prices develop for new technologies and new contractual arrangements to emerge. In any case no discrimination should be introduced between the different types of technologies.

Additional information on the EFET view regarding consumer based measures can be found in our Discussion Paper².

² EFET Discussion Paper on Capacity Remuneration Mechanisms to be submitted soon.

- (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**

While generation adequacy remains a national consideration for technical and legal reasons, it should certainly not be considered in isolation and the contribution of neighbouring systems to the national adequacy should be taken into account. We believe that this should be done in an implicit way when considering the overall security margin, through the regional and European level assessments of available margins and therefore through the likely contribution of interconnection capacity during tight adequacy periods. Member States should not focus on national solutions but should also consider the overall regional – or possibly European – surplus of capacity over demand and the reasonable pipeline of investment plans.

The ENTSO-E annual adequacy report, based on reports from national TSOs, does not in our view take proper account of the contributory role to security of export transactions, import transactions and even involuntary cross-border flows. Interconnections and their utilisation should be fully taken into account for any kind of assessment which may lead to decisions such as the establishment of capacity mechanisms.

Renewable assets' contribution to generation adequacy should also be taken into account through an adequate assessment of the level of guarantee they can provide (see above, question 2).

- (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?**

See above, question 7.

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

Directive 2005/89 was developed as a response to the 2003 blackout in Italy, and the experiences during liberalisation in California in 2000/2001. The objective was largely to provide a framework for Member States to develop clear national market design principles in the early days of the liberalisation process. Combined with Article 3 of Directive 2009/72, it does allow for national measures to be developed (Article 5.2), provided that these have regard to the objective of the internal market (e.g. Article 3.2c) and support the development of price signals from liquid wholesale markets (Article 5.1c.).

However, it may be usefully complemented and updated with new Commission guidelines to be adopted under Regulation 714/2009.

(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?

New generation patterns and physical flows induced by the evolution of the energy mix introduce new challenges for transmission system operators. An event in a specific country is likely to have direct effects in neighbouring countries or even at a European level. One of the first elements of ensuring generation adequacy should, therefore, be the increase of information sharing and operational coordination between TSOs.

Risk assessments and generation adequacy forecasts and checks could progressively be developed, although it is not certain that mandating them on the model of the Gas Security of Supply Regulation would remedy the shortcomings of the current ENTSO-E and national reports highlighted in question 7.

(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?

As mentioned in question 7, while generation adequacy remains a national consideration for technical and legal reasons, it should certainly not be considered in isolation and the contribution of neighbouring systems to the national adequacy should be properly assessed. Harmonisation of generation adequacy standards but also pooling of the adequacy assessment methodology could contribute to making sure that, e.g. “diverging preferences” regarding

security of supply on the part of national governments do not overlook the contribution of neighbouring markets and lead to an over-assessment of generation adequacy needs. Policies implementing national preferences that interfere with the functioning of the internal electricity market should be challenged by the Commission.

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

As mentioned in questions 4 and 5, a number of fundamental improvements to electricity market design should be worked on at European and national level to improve the signals coming from the energy (MWh) market even if several Member States are considering more fundamental interventions in the form of wide-ranging capacity-related measures.

As EFET, we believe that the market must be the primary tool for ensuring a match between supply and demand. Normally market signals, together with operating reserve operated by the TSO close to real time, would be sufficient to guarantee security of supply. Functioning markets would also provide for a certain level of incentives in terms of generation adequacy depending on sufficient level of price signal and on market participants' sensitivity as to how they should hedge against unexpected events such as plant outages or demand changes.

However, given the sheer range of measures that are now disrupting normal commercial behaviour in the internal market, it is no surprise to EFET that there are more frequent calls to intervene in order to support investment in generation capacity going forward. Many aspects of market design, in several Member States, are unsustainable. Furthermore there may also be a desire on the part of policy makers to go beyond the level of adequacy provided by the market, even if it were functioning effectively. And for markets to function effectively, this means the acceptance of a certain (generation) scarcity in the market leading to sufficient scarcity rent income for investors in the energy only market, also taking account of the participation of demand in the market, and accepting price spikes in the market.

Any interventions should not, at the same time, weaken the incentives provided by energy (MWh) prices: a right balance between the income of the capacity mechanism and the income of the energy only market should be found. Otherwise they will not achieve their objective of strengthening overall reliability.

In the event that Member States decide to establish some form of capacity mechanism, they should therefore be carefully looked at in terms of their

overall design and effects, and they should be developed according to market based principles. We agree with the European Commission' statement in the present consultation document that incompatible or poorly designed capacity mechanisms risk distorting trading, production and investment decisions in the internal market. Our Discussion Paper analyses a number of critical design elements of existing or future capacity remuneration mechanisms to help guide the assessment of such mechanisms' design and compatibility with the target model.

(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?**

If the market functions properly and if the market design is adapted to the new energy environment, there should be sufficient remuneration from a combination of forward markets, the spot market, intraday markets, as well as balancing mechanisms and ancillary services to keep enough flexible resources available. Markets will function insufficiently in this respect if regulation hampers price signals, such as:

- Inefficient market integration of specific generation technologies, such as renewables (null exposure to market price)
- Limited demand-response
- Lack of information for demand to assess reliability
- Caps/floors in energy markets
- No free entry/exit capacity in the market, subject to authorisations
- Political constraints, such as regulated tariffs
- Inappropriate access to the grid (delays in connection to the grid, key component ordering, authorisations delays)
- Inappropriate level of interconnection
- ETS market interventions

The introduction of capacity mechanisms is not a substitute for correct incentives on market participants. Correct incentives have to come from normal market signals, which must remain central in potential investors' assessment of expected profitability and likelihood of adaptation to market needs.

(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?**
- 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?**

The strategic reserve approach can only provide a transitional solution to concerns about generation adequacy. However there are concerns in terms of discrimination between existing and new generation and with respect to its potential to distort prices and market participants' behaviour. Other issues relate to the rules and the timing for the activation of such reserves and their effect on prices (for example if the activation of a strategic reserve merely eliminates the necessary price spikes).

Additional information on the EFET view regarding strategic reserves can be found in our Discussion Paper.

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

Our Discussion Paper assesses different groupings of capacity mechanism against some key criteria relating to the functioning of competitive markets, and the EU target model. We invite the European Commission to refer to this paper for more detailed discussion of the current understanding among EFET members of the potential distortions of markets or compatibility with the EU target model of the various existing or possible capacity mechanisms.

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

No comment.

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

Efficient balancing markets are imperative to encourage the development and maintenance of flexible capacity by placing a higher value on such resources in stressed situations. However, balancing markets do not deliver the long term signal that drives investments into a diversified energy mix to provide generation adequacy. Mechanisms that tackle two different timeframes should be considered separately. Incentives for flexibility should come solely from the energy (MWh) market.

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

In the current context where EU Member States seem to be pushing ahead with the adoption of capacity mechanisms, we would welcome an initiative of the Commission to limit *ex-ante* the potential deleterious effects of capacity mechanisms, and *ex-post* control their implementation, in order to maximise their compatibility with the EU Target Model. We believe that the European Commission should consider developing rules for coordination of capacity mechanisms, such as those proposed on interconnections, and that capacity mechanisms should remain under its scrutiny as part of the state aid and/or public service obligation monitoring processes.

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

EFET agrees with the European Commission statement in the present consultation document that if Member States decide to establish capacity mechanisms, they should be able to show they are necessary, proportionate, and transitional in nature (or at least that their price signals revert to zero when adequacy is met). EFET has developed a series of criteria for the evaluation of capacity mechanisms. If deemed necessary, capacity mechanisms should ideally:

- demonstrably enhance adequacy and reliability;
- avoid distortion or dilution of price signals from energy (MWh) markets;
- be non-discriminatory by technology and between existing and new capacity
- be transitory in nature, with process towards phase-out of their price signal as market functioning improves;

- focus on time periods further than four years ahead, in order to limit overlap and interference with forward and future markets in electricity;
- facilitate an active demand side in a non-discriminatory manner and promote wide consumer engagement through willingness to pay for reliability and/or price stability;
- take into account the contribution of non-national generation through interconnections (reduction of the local adequacy needs);
- minimise centralised processes and maximise the scope for voluntary management by market participants of their off-take and delivery obligations, so that market dynamics have a chance to function;
- use market-based remuneration mechanisms (e.g. by means of auctions, tenders, or subscription obligations);
- be suitable for EU wide / harmonised application.

(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?

See our answer to Question 19 above.