

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

07 February 2013

### Introduction

EWEA welcomes the European Commission public consultation and recognises it as a step towards the achivement of the goals outlined in the 3rd Package and the Internal Energy Market (IEM). This consultation facilitates a more transparent discussion on best ways to properly assess <u>system adequacy</u> and if there is need for implementing capacity mechanisms.

EWEA considers that refocusing on the assessment of system adequacy with this consultation will bring additional benefits with regard to a swift achievement of the IEM. EWEA hopes to give with this response an adequate picture on what is essential to ensure well designed regulatory frameworks for electricity markets with a large scale integration of a energy source like wind power in mind.

Generally, EWEA shares the belief that the completion of the Internal Energy Market will bring the long awaited benefits for European citizens of more choice, affordable prices, decarbonised power supply, better service and improved security of supply. However, we have also expressed concern that the policy and regulatory developments supporting the IEM still face significant obstacles. The structural market distortions, such as high market concentration, regulated prices and subsides to fossil fuels and nuclear energy, remain the main obstacle to creating the IEM. Overall, the different level of liberalisation in Member States jeopardises the benefits promised by the EU liberalisation packages.

Specifically, EWEA has highlighted the importance of the design and timely implementation of the Target Model and Network Codes to fully enable the far-reaching benefits that large-scale integration of wind power brings to the system. These benefits include better and more efficient use of assets and resources and increased flexibility. Both contribute to long-term security of supply and reduce costs for consumers.

## **Consultation questions**

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

Current electricity market prices play a pivotal role in investment decisions in power generation. However, it is necessary to make two important distinctions:

- electricity prices are part of a wider analysis involving, among others, technology costs (investment and operating), cost of capital (financing), taxes, CO<sub>2</sub> prices, volatility of fuel prices, additional sources of revenue (besides energy), and regulatory and policy risks.
- investment decisions in generation focus on wholesale rather than retail prices. Regulation or cap setting is generally applied to the latter and the degree to which this impacts investment decisions is not entirely clear for investors.

On average wind power constituted around 7 % of electricity production across the EU in 2012. In a number of countries, wind power now has an increasing share of total power production. This applies particularly to



countries such as Denmark, Spain, Ireland and Germany, where the share of wind in terms of total power supply were around 27%, 16%, 13% and 11% respectively in 2012.

As such countries demonstrate, wind power is becoming an important player on the power market in some Member States and such high shares can significantly influence prices. Wind power mainly influence prices on the power market due to the so-called "Merit-order effect": wind energy has a low marginal cost (zero fuel costs) and therefore shifts the supply curve on an electricity exchange resulting in a lower power price, depending on the price elasticity of the power demand.

At a given demand, this implies a lower spot price on the power market. When wind power reduces the spot power price, it has a significant influence on the price of power for consumers. When the spot price is lowered, this is beneficial to all power consumers, since the reduction in price applies to all electricity traded – not only to electricity generated by wind power.

However, in order to give a most accurate picture of the relationship between price formation on electricity markets and electricity generation from wind, a number of factors must be taken into account such as:

- The level of wind power penetration in the system, as well as the characteristic load variations and the pattern of demand compared with wind power variations;
- Geographical aspects such as the size of the control area, the geographical spread of wind power sites and aggregation;
- The type and marginal costs of the remaining power generation fleet (such as fossil and hydro);
- Costs and characteristics of other mitigating options present in the system, such as storage;
- The possibility of exchanging power with neighbouring countries via interconnectors; and
- The operational routines of the power system, for example, how often the forecasts of load and wind energy are updated (gate-closure times) and the accuracy, performance and quality of the forecast.

Wrongly, rather than being acknowledged for its beneficial impact on price levels for end-consumers, this merit-order effect and the lower average wholesale power price it induces has often been blamed for a worsened investment climate in new power plants since revenues in terms of price levels have fallen, resulting in a "missing money" issue for new investments in conventional power generation assets. However, it is accurate that high shares of wind energy which currently occur only in a handful of EU Member States induce lower capacity factors from conventional units and the business case particularly for the most slow-ramping and inflexible power plants seems to slip. High shares of variable RES like wind energy tend to increase the need for flexible power generation capacity and under transparent market conditions with a decent degree of regional market integration these kind of power plants should still make a sound business case on the energy-only markets.

Claims over "missing money" have to be contextualised in this broader analysis meaning that interactions between wholesale and retail markets have to be considered. For example, a clear impact of retail regulated prices is that they do not allow consumers to compare transparently costs between generating technologies. This lack of information has an important effect in switching rates towards providers offering more competitive technologies. Hence, regulated retail prices are an obstacle to efficient and fair competition to new entrants. Investors perceive regulated prices as political interference stifling investment and investor confidence.

Moreover, missing money claims have also to be contextualised in the European electricity liberalisation process. Whilst some progress has been achieved, many Member States still have not implemented and properly transposed the liberalisation packages, and national markets are still highly concentrated with dominant incumbents. If full liberalisation of markets was in place and regulated prices were removed, this would already better signal investment needs and opportunities for generation. Similarly, increased market

<sup>&</sup>lt;sup>1</sup> See EWEA 2013 Wind In Power 2012 European Statistics



integration by the means of pan European price coupling will accelerate convergence of prices smoothing their volatility.

(2)Do you consider that support (e.g. direct financial support, priority of 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?

Support mechanisms must have a clear and measurable objective and they must be transitional until functional markets are achieved. Well-targeted support mechanisms have positive impacts as long as they create certainty throughout investment timeframes

Subsidies to mature conventional technologies should not be considered as support mechanisms, but as an additional market distortion to be addressed. In comparison, dedicated wind energy support mechanisms and related regulatory provisions should be seen in the context of an incomplete liberalisation and lack of competition in the energy sector. Wind energy support mechanisms as well as priority grid access and dispatch are not a market distortion undermining investment in other technologies; they are a guarantee for new entrants given the structural risks and lack of a functioning internal energy market. Dedicated renewable energy support is necessary in the absence of effective competition and in view of the historical development of power generation. Their aim is to develop and deploy technologies and achieve cost-reductions, which is not justified for conventional technologies. Vertically integrated companies have developed their power generation portfolio enjoying the advantages of a natural monopoly, decades of fossil fuel and nuclear subsidies, which continue today and with costs and risks passed on to consumers via electricity bills or taxes.

In certain Member States, feed in tariffs and priority dispatch for coal indeed harms the business case of more flexible generation, adding to an already existing overcapacity. The inflexibility of old, inefficient power plants can sometimes endanger the business case of future investments in flexibility. Overall, a properly functioning and well-integrated energy-only market with increasing shares of variable renewables should trigger investments in flexible generation as well as in other flexibility sources such as interconnectors, energy storage and demand-side response.

## (3)Do you consider that work on the establishment of cross-border day ahead, intraday and balancing markets will contribute to ensuring generation adequacy and security of supply?

On-going efforts on cross-border market integration will contribute positively to security of supply as long as the practical implementation is executed in a timely manner and as long as functional markets are in place across EU Member States. This requires full transposition of liberalisation packages together with ENTSO-E network codes encompassing sound, non-discriminatory and well-balanced rules aimed at enhancing efficiency in system operation as well as maintaining security of supply and facilitating the integration of renewable electricity.

In EWEA's view, two key market developments will contribute to generation adequacy and security of supply, while at the same ensuring the most cost-effective integration of low marginal cost wind power in the system: 1) moving away from predictive transmission capacity calculation and static capacity allocation and 2) markets closer to real time, i.e. the uptake and regional integration of intraday markets. In order to reap the full benefits of an integrated system, increased security of supply being one of these benefits, it is necessary to make the best use of available transmission capacity and improve system operation routines.

Nevertheless, to have visible effects in system adequacy, market developments must rely on the development of grid infrastructure. Hence, the grid should also play a role in system adequacy assessments



(see answer to question 7). With the increased wind power capacity, these developments have to be ensured so that wind power technologies can enhance their contribution to generation adequacy<sup>2</sup>.

## (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?

The target model and Network codes must be given full support and implemented without delay. Next to their regional and in the mid- to long-term EU-wide integration, power markets in the EU must be transparent and liquid in order to increase investor confidence. The EU should first tackle more boldly structural market distortions: remove regulated prices, market concentration and historical subsidies for conventional power generation technologies. Moreover, the EU should improve market transparency and monitoring by providing further incentives for the extensive use of commercial power exchanges for trading. This will ensure transparent price formation signalling investment needs and opportunities. In parallel, Member States must be encouraged to properly transpose and implement the 2nd and 3rd EU Liberalisation packages.

Also, as outlined in response to the question 2 the EU should embrace flexibility, not capacity, as the main feature of tomorrow's power system and markets. With the introduction of wind energy and other variable renewables the market will push out slow-ramping and inflexible power plants while allowing the most flexible plants to maintain and enhance a sound business case. However, in the mid- to long term markets and products that value flexibility are needed in order to make a better case for assets that allow investments to be recovered over fewer running hours.

Last, but not least, a move away from national <u>generation</u> adequacy assessments to a EU integrated <u>system</u> adequacy assessment that comprises all forms of flexibility: generation, demand, interconnection capacity and, in the future, storage is required (see answer to question 7).

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

Each Member State should strive to set up well-functioning national power exchanges on all timescales as a first step, where they do not currently exist, and tackle the structural market distortions mentioned above. EWEA analysis has shown that only about half of the EU Member States have intraday markets and balancing markets in these differ considerable, posing significant obstacles to the IEM<sup>3</sup>. National system adequacy analyses must avoid national oriented and inward-looking approaches and instead take into account regional aspects such as cross-border power exchanges, available cross-border transmission capacity and the capacity credit provided by variable wind energy (see also answer to question 8).

Also, as security of supply is regarded as a public good Member States should define the level of system adequacy that is acceptable for the society. Member States should thereafter give TSOs the responsibility to maintain the decided level in a cost efficient manner. The implicit requirement on the electricity market is that involuntary load shedding should not occur under any circumstances even though a one hundred per cent generation adequacy would be very expensive. An administratively set capacity margin or an aim to ensure supply being met at all times disregarding costs may imply that too much or too little capacity is covered leaving society with either inefficiently high costs or a security of supply that falls below the social optimum, thus Members States must clearly define the system adequacy level that is desirable. This level should be used by TSOs when assessing system adequacy and to decide if the system is to be considered adequate or not.

<sup>&</sup>lt;sup>2</sup> See TradeWind project report - Section 6.4 (p.65-66)

<sup>&</sup>lt;sup>3</sup> Creating the Internal Energy Market, EWEA 2012, p14.



(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?

No opinion.

### 1 Assessing generation adequacy

EWEA believes that system adequacy should not be a secondary consideration to generation adequacy and it should be assessed on the basis of the entire power system across the EU. EWEA has repeatedly called for a review of current practices of system adequacy in the context of European market integration and increasing penetration of variable renewables. Hence, TSOs must be encouraged to thoroughly analyse all aspects of firm capacity from wind power in an integrated system at EU level.

### Consultation questions

(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: National level, regional level, and European level?

Yes. The European power system has experienced more than fifteen years of on-going liberalisation, integration of renewables and market integration efforts. These developments have impacted the fundamentals around which the system was originally designed and operated. In line with these changes, system studies, network analyses and operation techniques have been constantly adapted but seldom at the pace required. System adequacy assessments have not evolved since the advent of liberalisation and the introduction of new and innovative power generation, e.g. wind power, and demand response technologies.

To date, adequacy is measured exclusively on the supply side by establishing a static reliability target that ignores the dynamic behaviour of generators and the interactions with other parts of system and other interconnected systems. At national or control area level, generation adequacy is calculated with probabilistic methods with advantages and limitations that need to be acknowledged, especially when it comes to capturing wind energy characteristics and system flexibility requirements. At European level, adequacy is assessed deterministically by aggregation of national data rather than by a system wide assessment that takes into account all sources of adequacy.

System adequacy can no longer be thought of exclusively in terms of generation capacity. An equal role has to be given to demand and interconnection capacity as they are, equally, fundamental parts of the system. Moreover, at generation level, conventional generation capacity can no longer be consider as the only reliable source for adequacy as the ENTSO-E SO&AF suggests<sup>4</sup>. All generators are subject to (planned and unplanned) outages and have different dynamic behaviour to cope with load and RES variability. This behaviour must be included when assessing adequacy.

<sup>&</sup>lt;sup>4</sup> RES including run-of-river hydro are considered as 'Non-usable capacity'



Considering that most new generation capacity will continue to come from RES<sup>5</sup>, it is urgent to better understand their capacity credit in an aggregated form. In the future, demand response and storage will also play a role in system adequacy. Assessment methodologies have to be able to incorporate these and other relevant developments accordingly. Hence, TSOs must be encouraged to thoroughly analyse all aspects of firm capacity from wind power and other renewables in an integrated system at EU level. Despite the real physical capacity value of wind power and other renewables, they are not yet used for capacity planning to any significant extent. The development of a harmonised method for assessing wind power capacity credit is needed in order to properly evaluate its contribution to system adequacy at European level.

Consequently, there is a need for in-depth reviews of system adequacy assessments. First, the focus should shift to <a href="system">system</a> adequacy rather than <a href="generation">generation</a> adequacy. Second, at European level, the move towards a more integrated internal energy market will lead to increased cross-border trading, an aspect that current generation adequacy ignores. Third, the calculation of the capacity value, also called capacity credit, of wind power needs to be agreed and applied in a standardised way, so that it can be included in system adequacy assessments (see also response to question 8a).

(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?

Many TSOs consider RES (wind and solar above all) as "non-usable capacity", both regionally and in the ENTSO-E SO&AF. A flexibility assessment requires the inclusion of capacity from RES. Due to the variability of wind its capacity credit is lower than that of other technologies. Nevertheless, there is a certain amount of firm wind capacity, which increases as power systems become increasingly integrated through increased transmission capacity, and which contributes to the adequacy of the power system. Again, one of the barriers to properly assess the amount of firm capacity from wind energy is the absence of a standardised accepted method for calculating capacity credit. ENTSO-E should develop and utilise a harmonised method for wind power capacity credit assessment in European generation adequacy forecast and the TYNDP, in order to properly evaluate the contribution of wind power to system adequacy. See response to question 7 for further elements to be included in future system adequacy analyses.

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

Today, the SO&AF is an overview based on aggregation of national data, subject to multiple assumptions and data adjustments necessary for information processing. Also, it has to be read in conjunction with the Regional Investment Plans and the Ten-Year Network Development Plan in order to obtain a broader picture of system adequacy. Best use should be made of these ENTSO-E deliverables as EU-wide reference documents which are regularly updated and reflect the developments towards a decarbonised power system in the mid- and long-term. To this end, these ENTSO-E deliverables must duly take into account national RES development plans and targets as well as incorporate the points on system adequacy as outlined above.

For wind, the capacity credit should be calculated using multi-year chronological wind and load series rather than by frequency distribution methods as applied today for conventional generation (the so-called load duration curves). This is because the capacity credit of wind is sensitive to the timing of wind energy

<sup>&</sup>lt;sup>5</sup> In 2007, 48% of all new capacity additions were RES, 38% wind energy alone. Between 2007 and 2012, RES has represented yearly between 55% and 78% of new capacity additions. EWEA 2013. Wind In Power. 2012 European Statistics. The NREAP forecasts indicate this will continue to at least 2020.

<sup>&</sup>lt;sup>6</sup> The frequency distribution method does not capture the variability of wind and the correlation between wind and load.



delivery relative to peak load periods and because weather influences both electricity consumption and wind power generation.

Calculating a capacity credit based on a frequency distribution of these periods would yield an inaccurate picture of wind capacity credit. Hence, it is critical to use wind and load profiles that result from a common weather driver to calculate wind capacity credit. This means, at least one year of hourly wind generation and load from the same calendar year must be gathered, but to capture the most severe peak requirements, yearly variations of wind, multi-year analysis is required (at least ten years, ideally thirty years of time synchronised wind and load data).

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

In case the Electricity Security of Supply Directive is to be amended it should include the obligation to EU Member States to properly assess system adequacy before any capacity mechanisms are considered, as outlined in the response to questions 7 and 8.

(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?

No opinion.

(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?

Adequacy assessments methods should be standardised thus an EU-wide assessment is needed in which the capacity value of wind and other RES are duly considered. This has not been analysed thoroughly in an integrated system for the EU taking into consideration the full contribution of an interconnected system with common rules for capacity allocation, nor has the interplay between wind and solar power generation and its potential to help mitigate variability and thus provide a higher share of firm capacity. It seems reasonable to improve understanding of system adequacy in Europe and carry out further research on this in view of the potential downsides of capacity payments: they result in a disincentive to invest in grid infrastructure, demand–side management and energy storage (see also response to question 12).

## 2 Mechanisms to address generation adequacy concerns

### Consultation questions

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

Functional and transparent markets are the most important factor in investment decisions. No capacity mechanism may provide the sufficient certainty for investments in a dysfunctional market. Equally, a long term policy framework which creates certainty throughout investment cycles and beyond gives clearer signals and reduces risks in investment decisions. For example, long-term renewables deployment targets indicate the further need for investments in infrastructure, demand-side response, storage, and flexible generation.

Before calling for or implementing any capacity remuneration mechanisms, two important questions should be clarified: is there a capacity problem in any given power system and in the EU, and if so, how big is it and for which period of time? On how much firm capacity from variable renewables can we count on, both in a national and a pan-European perspective?



As national practice shows, capacity remuneration mechanisms turn out to be complex with free riders and other externalities resulting in further market distortions. Most notably, capacity remuneration mechanisms remove incentives for investments in cross-border grid infrastructure, demand-side response and energy storage. Furthermore, they impede cross-border trade of electricity since the reduction of peak prices they often imply lowers the price arbitrage effect in cross-border power exchanges. Only if a clear and significant capacity gap is identified after a thorough system adequacy analysis, careful and temporary measures in terms of capacity remuneration mechanisms could be considered.

More generally, the question should be what alternative market-based revenue streams could be created in the future in order to ensure investors' interest in power generation and tackle a potential generation gap in the electricity sector in a less market-distorting manner. New markets for grid support services, also called ancillary services, might provide an additional source of income for all providers of flexibility, including renewables, without creating additional market distortions and in a less discriminatory way than with capacity payments. The recent system services consultation for the Irish power system shows how incentivising ancillary services provision can decrease the capacity payments mechanism (CPM)<sup>7</sup>.

Grid support or ancillary services are all services required by the system operator to maintain the integrity and stability of the transmission or distribution system as well as the power quality. Ancillary services have always been part of the electricity industry, but their relevance has only been recognised recently due to unbundling and liberalisation efforts in the energy sector. Markets for ancillary services remain underdeveloped in Europe. Instead, compulsory requirements without remuneration through grid connection requirements remain the most common form of provision.

As generators are not paid directly for fulfilling compulsory requirements, they include these compliance costs in the calculation of their energy prices, which in the end, are paid by consumers.

If all generating facilities could fulfil minimum technical requirements for ancillary services at the same costs, there would be no impact on the consumer. But this is not the case. Generation technologies differ in their cost-effectiveness in delivering electrical energy and in providing ancillary services, due to their inherent capabilities. This leads to differences in costs between the various types of generation.

Consequently, grid connection requirements in Europe should firstly consider market options for ancillary services instead of compulsory non-remunerated requirements. These options are markets for grid support services and ideally they should be utilised as fully as possible because they lead to higher cost-effectiveness and hence to a reduction of electricity costs for users.

An EU grid support services market would cover all types of flexibility services, including system stability, balancing, adequacy, emergency and system restoration services, ensuring system adequacy by providing incentives for all types of flexibility (infrastructure, demand-side management, storage in the longer-term, generation) in a non-discriminatory and market-based way.

(13)Under what circumstances would you consider market functioning to be insufficient? (a)To ensure that new flexible resources are delivered?

No opinion.

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<sup>&</sup>lt;sup>7</sup> Eirgrid, SEMO, Soni, 2013. DS3: System Services Consultation Finance Arrangements http://www.eirgrid.com/media/System\_Services\_Consultation\_- Finance\_Arrangements.pdf



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

See response to questions 7 and 8.

#### (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?

This question can only be answered in relation to the particular characteristics of the given power system in question, i.e. level of interconnectivity and of development of the internal power grid, geographical distribution of all remaining power system assets, level of maturity of power markets, system operation routines and degree of availability of other flexibility sources, such as flexible power generation, storage and demand-side response. Only with due consideration of these aspects a meaningful answer to this question can be given, which renders a one-size-fits-all approach on this issue impossible.

## (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?

As long as the strategic reserve is controlled by the TSO, used as a last resort measure and never interfere with the price formation it would not deteriorate competition. In order to ensure this functionality, some aspects of design such as size and duration may require special consideration. These two aspects should be, therefore, carefully considered when strategic reserves are put in place in order to minimise any negative externalities. In particular, when flexible generation exists, a strategic reserve should rather aim at extending the lifetime of existing power plants until the system adequacy issue is resolved, rather than providing incentives for building new power plants which may remain in the system for years.

### (15)In relation to capacity markets and/or payments:

(a)Which models of capacity market and/or payments do you consider to cause the most and least distortion and to be the most compatible with the effective competition and the functioning of the internal market, and why?

Apart from carefully designed strategic reserves - limited in size and duration - all other forms of capacity remuneration mechanisms have historically proven to be severe regulatory interventions with unforeseen consequences on investment decisions and the functioning of the energy-only market. More broadly, they have had implications on the creation of the Internal Energy Market in general. Capacity remuneration mechanism models bear three main risks:

- that of a lock-in effects with investments in power generation being driven solely by the available capacity remuneration,
- the creation of inefficiencies through maintaining inefficient and possibly unneeded polluting power plants which under normal market conditions would be commercially non-viable in the system
- the distortion of incentives available for interconnectors, uptake and further integration of power markets, energy storage and demand-side response.

## (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?

There is little experience in capacity remuneration mechanisms specifically geared at incentivising flexible generation or uptake of flexibility sources in general. Overall, it remains to be seen to what extent the energy-only market model ensures sufficient investment levels in flexibility sources. This should be carefully examined by the EC in view of lower average spot price levels and higher price volatility with ever increasing shares of variable wind energy.



Only after such an analysis and the clear need for more flexibility sources in the power system being identified, specific remuneration models of flexibility sources – comprising not only flexible power generation, but also demand-side response and energy storage – should be considered. Such remuneration models for flexibility certainly require further research as they could be part of a wider grid support services market form which could include a specific mechanism to reward flexibility. Alternatively, flexibility could be incentivised in the short term by altering balancing market regimes to encourage flexibility in all its forms: altering bidding rules in balancing markets allowing demand-side response to participate.

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

See response to question 14 b) and 15 a)

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

No opinion.

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

See response to question 15 b)

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

First and foremost, the Commission should ensure that system adequacy assessment methods are standardised across the EU together with a EU-wide due assessment of the capacity credit of wind and other RES, ideally in the next ENTSO-E SO&AF. The Commission should emphasise that any potential <u>system</u> adequacy gap must be thoroughly analysed, as well as the inability for a fully liberalised and transparent market to incentivise flexibility, before any capacity remuneration mechanisms are considered at national level, before setting out any blueprints for EU-wide capacity mechanisms.

## 3 Framework for assessing capacity mechanisms

#### Consultation questions

(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, together with ensuring that the analyses as outlined in the response to question 18 are carried out before any capacity mechanisms are considered.

(20)Do you consider the detailed criteria set above to be appropriate? (a)Should any criteria be added to this list?

More detail and emphasis on point (1) in the list should be considered, as outlined in the response to question 18.

### (b) Which, if any, criteria should be given most weight?

The criteria outlined under point (1) should be given most weight in order to ensure that this analysis is properly carried out before further aspects of the actual capacity mechanism design are scrutinised. Criterion 5 is as important. Bullet (a) maintains the level playing field in the internal market. Bullet (b) gives incentives to react on scarcity signals on all sides of the market (demand/ supply and in between (storage)).