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

Electricity prices are on average below the marginal cost of new electricity. In a perfect market, this would indicate that there is no need of new production. However, most of the investments in electricity production are subsidised in one way or another. One example is the existing support schemes for renewables leading to lower electricity prices. Renewable energy resources are important in several aspects, i.e. for diversifying electricity production which improves security of supply. However, it is essential in the longer term, that new production becomes competitive on the market without support schemes. Otherwise there are risks that market prices are too low to guarantee needed generation 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?

First of all it is important to bear in mind that no electricity production historically has entered the market solely on market conditions. Lately, large amounts of variable renewable electricity generation have been connected to the European grid which generally depresses the average price of electricity. This is also due to the fact that the support schemes being used in several countries makes the electricity production from renewables independent of the market price of electricity. It is important that renewable electricity production is integrated in the market and also contributes in forming the market price. Variable production (in a well functioning market) also creates price peaks and make production that can be regulated more profitable. In a market that is not as well functioning the result will be a lower electricity price that will affect the profitability of production needed to balance the volatile renewable electricity generation.

A fast development of renewable energy production is and has been important in order to improve security of supply and to reach agreed climate targets. At present, some member states already have, or are considering introducing capacity mechanisms. Such subsidies allow old generation, often fossil-based production to be conserved. This may lead to reduction of trade between countries, distortion of competition and that the cost of consumers increases.

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?

Sweden supports the conclusion from February 4, 2011 of the European Council that the internal market should be completed by 2014 so as to allow gas and electricity to flow freely. Cross-border day ahead, intraday and balancing markets bring benefits for the consumers and will contribute to ensure security of supply. The development of intraday markets will benefit the integration of renewables in the electricity market since it's easier to make short-term forecasts for wind etc. The shorter the time between trading and physical delivery, the more pricing can contribute to security of supply. The network codes are essential in this respect and will establish uniform cross border rules for market participants.

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 first step is the implementation of the forthcoming network codes. The market and relevant parties must be given appropriate time to adapt to the new circumstances. Further, it should be noted that the security of supply of the system is not solely satisfied by meeting necessary adequacy levels. For that a broader perspective is needed that also takes into account capabilities and flexibilities in both generation and demand. Sweden agrees with the Commission's concerns on the issue of capacity mechanisms. Instead, cost-effective measures should first be undertaken. Before capacity mechanisms are adopted they must be compared with other potentially cost effective measures that do not undermine the price signal such as efforts to increase integration between countries, increased demand flexibility both from industry and among consumers as well as smart grids and smart meters. It is also important to reform support schemes in a direction that makes renewable electricity production dependent of the market price. The analysis of whether capacity mechanisms should be introduced must be made based on the relevant market, not the individual Member State.

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

Implementation of the internal market is key to reach the EU targets for renewable energy in an efficient and market-oriented manner. Correct price signals, unregulated prices, and increased international trading between countries improves security of supply and leads to more efficient use of resources. Before capacity mechanisms are adopted they must be compared with other potentially cost effective measures that do not undermine the price signal such as efforts to increase integration between countries, increased demand flexibility both from industry and among consumers as well as smart grids and smart meters.

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?

Preferences are multi-dimensional covering both goods and services, risks and inter-temporal trade-offs. By providing flexibility to consumers market signals will provide for both utility maximisation and security of supply. With smart grids and smart meters, each customer can make its own choice when to consume and when it is too expensive to consume, i.e. the consumers are active and react to price signals. At the same time, people that want predictability can pay a risk-premium to avoid price-fluctuations.

7. Do you consider that there is a need for review of how generation adequacy assessments are carried out in the internal market?

At a National, Regional and European level useful adequacy assessments are already carried out. However, there is always a need to review the assessments used for determining the security of supply and the peak load capability. It should be noted that generation adequacy on its own (comparison between load and available generation over a period of time highlighting the most critical hours) is not the only measure of short and long term system security.

In particular, is there a need for more in depth generation adequacy reviews at:

a) Already carried out in Sweden on an annual basis.
b) Emergency planning and crisis management for the power sector in the Nordic countries is done today within the NordBER cooperation (Nordic Contingency Planning and Crisis Management Forum).
c) No. The third package National adequacy assessments are already prepared to Regulation (EC (714/2009) by TSOs of the member states. The ENTSO-E SO&AF report is sufficient.

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?

There is a need for a regional assessment of the capacity. However, before considering providing additional request for information there needs to be a pragmatic view taken on the quality of the data that is available and also the needs of the system in order to keep the administrational burden low.

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

It should be noted that security of supply is becoming not only a question of adequacy but also flexibility in both generation and demand.

9. Do you consider the Electricity Security of Supply Directive to be adequate?

The Electricity Security of Supply Directive and infrastructure (EC 89/2005) is adequate in what it was meant to achieve. The directive sets out clear obligations on MS to ensure the monitoring of security of supply in medium and long term. Further, it can be noted that there are several acts (and more to come with the network codes) that deal with security of supply in one way or another. However, before considering revising the directive or providing additional requests there needs to be a thorough analysis made on what is needed as security of supply originate from structurally different issues.

If it should be revised, on which points?

A clarification of the responsibilities of the TSOs in the short term (Art 5 “maintaining balance between supply and demand”) could be welcomed in order to increase the awareness that market participants and authorities also have a role to play in that respect.

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?

Sweden can support mandatory risk assessments. However, if generation adequacy plans includes strategies to implement capacity mechanism, such actions must be compared with other potentially cost effective measures.

11. Should generation adequacy standards be harmonised across the EU?

No, the generation adequacy assessment is dependent on the specific structure of generation and demand in given system or region. Security of supply originate from structurally different issues. At

the same time, it is important to avoid introducing country specific regimes that leads to reduced cross-border trade and less optimal use of resources.

What should be that standard or how could it be developed taking into account potentially diverging preference regarding security of supply?

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

Sweden agrees with the Commission's concerns on the issue of capacity mechanisms. Such mechanisms allow old generation, often fossil-based, to be subsidized in order to be available when more volatile production, e.g. wind, not are producing electricity. Sweden believes that capacity mechanisms may lead to reduction of trade between countries, distortion of competition and that old fossil-based production is conserved. Sweden agrees with the Commission that even Member States who do not see the need for intervention in terms of capacity mechanisms will be affected by such measures implemented by their neighbours, as they can distort market behaviour and investment decisions across the internal market. Sweden supports that cost-effective measures are undertaken. Before capacity mechanisms are adopted they must be compared with other potentially cost effective measures that do not distort the price signal such as efforts to increase integration between countries, increased demand flexibility both from industry and among consumers, integration of renewables in the electricity market as well as smart grids and smart meters. The analysis of whether capacity mechanisms should be introduced must be made based on the relevant market, not the individual Member State or on EU-level.

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

a) to ensure that new flexible resources are delivered?

It is important to also focus on flexible demand response which might replace generation in the balancing hour.

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

It is important to also focus on flexible demand response which might replace generation in the balancing hour. The responsibilities for detection and remedial actions to energy market insufficiencies will depend on the market design. In this respect it is fundamental to have well designed markets for several time schedules; from financial markets, to spot and intraday and finally balancing regulation market.

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?

A strategic reserve is used at scarce electricity power situations and not as energy supply. A large phase out of any type of technology would require replacement or increased imports. Strategic

reserves can be designed as a short term mechanism in order to overcome temporary market challenges. Sweden has phased out fossil fuels in almost all of our electricity production. This is a consequence of a conscious mix of policy tools aiming at increasing energy efficiency and promoting renewable sources. The existing strategic reserve has been one part of the solution.

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?

All capacity mechanisms, including strategic reserves, implicate that required capacity is directly or indirectly centrally determined rather than being left to the decisions of investors based on market prices. In that sense they always affect the market to some extent. Strategic reserves, however, leads to less distortion of the market compared to more far reaching capacity mechanisms. It is important that strategic reserves are withheld from the market and used only during times of scarcity when all available bids on the market have been used. A strategic reserve should be a temporary solution and should also have an increasing share of demand reduction resources. Production resources should be made up of old plants which otherwise would be retired as uneconomical.

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?

Strategic reserves are least distortionary as they are not cost driven (like capacity market and /or payments) to the market prices if well designed.

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?

Strategic reserves and demand side responses to higher prices

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

Capacity market and /or payments

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

Strategic reserves as they are not cost driven

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

Incentive structures of a possible capacity mechanism should not create adverse incentives to those created by other market mechanisms in other timeframes. The balancing market is based on marginal pricing from both supply and demand resources.

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

It would be difficult to define the appropriate level of capacity/capability adequacy for each individual MS as a one fits all solution is unlikely to be cost efficient. Instead, the European Commission should require comprehensive analysis of possible alternatives from member states intending to introduce capacity mechanisms.

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

As stated before, Sweden is of the opinion that other cost effective and market related measures should be preferred, when possible, before capacity mechanisms are introduced. However, introduction of capacity mechanisms is already a fact and since these measures are likely to affect the European market and will potentially be irreversible it might be necessary to develop guiding principles.

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

The guiding principles must comprise at least
- Necessity and show clear justification
- Clear exit criteria and phase out plan
- Market, regional and cross-border compatibility

The mechanisms should be market based, cost effective, economically efficient, non cost driving and be financed by the Balance responsible providers as the need for the mechanisms is not related to grid requirements.

a) Should any criteria be added to this list?

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